QL
522.2
A1B6i5
v.1
ENT

BIOLOGIA

CENTRALI-AMERICANA.

INSECTA.

RHYNCHOTA.

HEMIPTERA-HETEROPTERA.

VOL. I.

BY

W. L. DISTANT, F.E.S.

1880–1893.

CONTENTS.

	Page
Introduction	v
Explanation of Plates	xi
Errata et Corrigenda	xx
Pentatomidæ	1, 304, 452
Coreidæ	103, 351, 458
Lygæidæ	173, 378
Pyrrhocoridæ	220, 411, 461
Capsidæ	234, 415, 462
Plates.	

INTRODUCTION.

THIS volume is devoted to the description and enumeration of five Families belonging to the Heteropterous portion of the Order Rhynchota, viz. the Pentatomidæ, Coreidæ, Lygæidæ, Pyrrhocoridæ, and Capsidæ, as found in Central America.

Aided principally by the collections made so exhaustively by Mr. Champion in Guatemala and the State of Panama, and by Mr. H. H. Smith in Mexico, supplemented by the collections of many other naturalists, I have been able to study a wealth of material illustrating a restricted fauna such as is very seldom amassed, and has doubtless never been surpassed. We possess no complete account of the Rhynchota of any portion of Tropical South America, and for purposes of comparison are limited to two faunistic works, which fortunately, however, refer to regions both north and south of our area. These are the 'Check-List of the Hemiptera-Heteroptera of North America,' by Prof. Uhler, published in 1886, from which I eliminate the Mexican and Antillean species included by that author, and the 'Hemiptera Argentina' of Prof. Berg, 1879–84. Other papers exist relating to different regions of South America—notably that of Stål on the Hemiptera of Rio Janeiro,—but these are of a more or less fragmentary character, and the only moderately complete catalogues which can be used for statistical reference and comparison are those of Berg and Uhler. Additional genera and species have been more recently described from both the regions studied by those entomologists, but I have not gone beyond their work and dates.

PENTATOMIDÆ.—This family of Heteroptera, mostly containing large and handsome species, readily observed and not difficult of capture, has long been a favourite one with collectors and much studied by students of the Order. We may therefore, with some confidence, accept our own enumeration as fairly representative of Central America, and also rely on the approximate completeness of the lists given by Berg and Uhler. Our region is at once seen to be very rich in Pentatomidæ, as I have enumerated 104 genera and 377 species, as against 57 genera and 149 species given for America north of Mexico, and 41 genera and 105 species recorded in the Argentine fauna. When our 104 genera are analysed—for our knowledge of the distribution of

species is too limited to allow comparative deductions to be made thereon—we arrive at the following conclusions, derived of course, from present information only :—

Nearctic genera, *i. e.* Central Am. gen. also found north of Mexico * . .	11
Neotropical genera, *i. e.* ,, ,, ,, south of Panama . .	48
Neogean genera, *i. e.* ,, ,, found north of Mexico and also south of Panama	26
Genera at present only recorded from Central America	18
Genus at present only recorded from Central America and the Oriental Region	1

Of these genera, 26 are also found in the Antillean sub-region; but the records of the Rhynchotal fauna of these islands are still very imperfect, and our knowledge is almost confined to Cuba and Jamaica †. The following genera have also a wide distribution outside the American continent :—*Canthophorus*—Europe, Japan; *Pangæus*—Australia, New Zealand; *Onalips*—West Africa; *Geotomus*—Europe, Asia, Africa, Madagascar, Australia; *Audinetia*—India and the Malay Archipelago; *Podisus*—Europe, Asia; *Nezara*—Europe, Asia, Africa, Australia; *Piezosternum*—Tropical Africa.

In his Monograph of the Tertiary Insects of North America, Mr. Scudder has included the genus *Cyrtomenus* as representing the remains of a fossil species found in the Tertiary beds at Green River.

Coreidæ.—This family, consisting of large and conspicuous insects seldom absent from collections, may also be considered as moderately well enumerated in most faunistic works, and hence we may with considerable certitude compare our list of Central-American genera and species with those already referred to of the Argentine Republic and of North America. Central America is thus shown to possess 75 genera and 210 species, as compared with 34 genera and 59 species recorded by Prof. Uhler from the Nearctic region, and 36 genera and 60 species enumerated by Prof. Berg as belonging to the Argentine fauna.

Analysing the distribution of our 74 genera, the following results are obtained :—

Nearctic genera, *i. e.* Central Am. gen. also found north of Mexico . .	14
Neotropical genera, *i. e.* ,, ,, ,, south of Panama . .	33
Neogean genera, *i. e.* ,, ,, found north of Mexico and also south of Panama	19
Genera at present only recorded from Central America	8

* I here follow the method of Dr. Sclater, as applied to the species of Mammalia, in the Introduction to the volume devoted to that Class in this Publication.

† The results of the Antillean expedition of Mr. H. H. Smith are not yet published.

Of these genera, 17 are also recorded as found in the West Indian Islands, whilst *Alydus*, *Stenocephalus*, *Neides*, and *Corizus* are also well known in Europe.

Amongst the Tertiary insects of North America, Mr. Scudder has recorded the presence of the genera *Cydamus*, *Protenor*, and *Corizus*.

Lygæidæ.—Our statistical comparison in this family is only applicable to the Nearctic fauna, as the genera and species enumerated by Prof. Berg as representing the Argentine fauna are manifestly inadequate in number. This is not surprising when we remember that the capture of the members of this family requires, in many cases, acquired knowledge of their habits. In the Argentine Republic collecting or field entomologists are few in number, but in North America the case is different, and in Central America we had the services of Mr. Champion, who had previously collected Rhynchota in England.

I have been able to determine 54 genera and 175 species of Lygæidæ from Central America, as against 40 genera and 87 species in Prof. Uhler's list of the Nearctic Heteroptera, and 18 genera and 31 species recorded as found in the Argentine Republic.

The distributional analysis of our 54 genera is as follows:—

Nearctic genera, *i. e.* Central Am. gen. also found north of Mexico . . .	7
Neotropical genera, *i. e.* „ „ „ south of Panama . . .	7
Neogean genera, *i. e.* „ „ found north of Mexico and also south of Panama	13
Genera at present only recorded from Central America	26
Genus at present only recorded from Central America and Polynesia . .	1

Of the above genera, 8 are also recorded from the Antilles, but the large number at present known as peculiar to our fauna is evidently only in relation to the many now for the first time described, some of which will be doubtless found to have also a more southern habitat. The Lygæidæ are often widely distributed throughout the world, and 17 of our genera have that ubiquitous character:—

Europe, Asia, Africa, Australia	2
Europe, Asia, Africa	4
Asia, Africa, Australia	2
Europe, Asia	2
Africa, Asia	2
Europe	4
Polynesia	1

Our genera are also well represented in Mr. Scudder's list of the Tertiary insects of

North America, and comprise *Lygæus*, *Nysius*, *Geocoris*, *Ligyrocoris*, *Cholula*, *Trapezonotus*, and *Rhyparochromus*.

Pyrrhocoridæ.—This family is merged by some authors with the Lygæidæ. The absence of ocelli is the distinguishing character of the family, but in some genera these only just reach the vanishing-point, and the position of such insects becomes difficult to determine.

I have identified 10 genera and 33 species as found in Central America, contrasting with 3 genera and 7 species given as found in the Nearctic area, and 2 genera and 6 species recorded as belonging to the Argentine fauna. Our 10 genera are thus distributed:—

Nearctic genus, *i. e.* Central Am. gen. also found north of Mexico . . .	1
Neotropical genera, *i. e.* „ „ „ south of Panama . . .	3
Neogean genera, *i. e.* „ „ found north of Mexico and also south of Panama	2
Genera at present only recorded from Central America	3
Genus found in Central America? and nearly throughout the Old World .	1

Of these, two have been recorded from the Antilles; *Dysdercus* is found in Australia and generally throughout the Ethiopian and Oriental regions, whilst *Pyrrhocoris* rests on doubtful or uncorroborated evidence as a Central-American genus. Specimens of *P. apterus* were received in the Van Patten collection as from Costa Rica, but no other examples from any of our localities have been secured, nor has any other record been made of its presence on the American continent. Moreover, I am informed that a few accidental inclusions have been found in this collection.

In Tertiary times, according to Mr. Scudder, the genus *Dysdercus* existed in North America as at the present time.

Capsidæ.—In this family our collections proved very representative, and I have enumerated 80 genera and 313 species as found in our fauna; contrasting with 80 genera and 156 species in Prof. Uhler's Nearctic list *, and 26 genera and 58 species as recorded by Prof. Berg in the Argentine fauna.

An analysis of the known distribution of our genera can only be of a fragmentary and partial character, as so little is known of the Capsidæ found in the tropical portion of South America, and future research in the latter country will doubtless greatly alter the deductions now made.

* Considerable additions both in genera and species have recently been made to the Nearctic Capsidæ; but, as before stated, our comparison is confined to the List published in 1886.

Nearctic genera, *i. e.* Central Am. gen. also found north of Mexico . . .	8
Neotropical genera, *i. e.* „ „ „ south of Panama . . .	7
Neogean genera, *i. e.* „ „ „ north of Mexico and also south of Panama	6
Genera at present only recorded from Central America	59

I have only been able to find a record of one of these genera as inhabiting the Antilles; but this, of course, denotes merely a want in entomological knowledge. A few of the genera are very widely distributed. *Miris*, *Megacœlum*, and *Lygus* are found in Europe, Africa, and Asia, the first-named being also recorded from Polynesia, and probably existing in Australia. *Calocoris* has a wide Palæarctic distribution.

In the Tertiary deposits of North America, Mr. Scudder has recognized the remains of *Hadronema*, *Pœcilocapsus*, *Carmelus*, and *Fuscus*.

The total enumeration of the preceding five families of Central-American Heteroptera is thus seen to amount to 323 genera and 1108 species, the distributive relationship of which is largely with the fauna south of our area, and one which will prove to be still larger when that fauna is more worked and described. Our collections have been particularly exhaustive from Mexico, Guatemala, and the State of Panama; from Costa Rica our material was smaller, but it yet produced an exceedingly large percentage of new species, and the writer looks to Costa Rica for many future additions to the Central-American fauna. The numbers of new genera and species described are as follows:—Pentatomidæ, genera 11, species 120; Coreidæ, genera 4, species 63; Lygæidæ, genera 26, species 111; Pyrrhocoridæ, genera 3, species 13; Capsidæ, genera 61, species 274—total: genera 105, species 581.

Mimicry is not uncommon among the Heteroptera, and in the present volume there are given several good instances which a reference to the coloured figures will render quite palpable. Mimetic resemblances to ants are found in *Galeottus formicarius*, Dist., a species of Coreidæ, and in *Phœax formicarius* and *P. balteatus*, Dist., belonging to the Pyrrhocoridæ. In the Lygæidæ we have in *Toonglasa forficuloides*, Dist., a remarkable mimic of a species of *Forficula*. The Capsidæ exhibit this phenomenon to a greater extent than any of the preceding families, not only mimicking outside genera, but also exhibiting specific mimicry amongst themselves. Thus, the genus *Lygdus* not only possesses a strong Lygæid appearance, but one species (*L. mimicus*, Dist.) bears a remarkable resemblance to the genus *Oncopeltus*, and I at first casually considered this Capsid as certainly belonging to it; whilst the genus *Cymus*, belonging also to the Lygæidæ, is mimicked by the Capsid genus *Falconia*.

Specific mimicry in the Capsidæ is exhibited between *Paracalocoris annulatus* and *Lampethusa anatina* and between *Proba gracilis* and *Lygus tribulis*—all local species described in this volume. Other, though less pronounced, mimetic affinities may be seen on examining the figures belonging to other genera and species of this family.

In conclusion, I have to acknowledge my obligations for valuable help afforded in the preparation of this volume. The late Dr. Stål died before the first part appeared, but not before he had assisted me with some identifications, and I subsequently had an opportunity of examining the types of many of his species through the considerate courtesy of Dr. Aurivillius, of the Stockholm Museum. My late friend Dr. Signoret placed his collection unreservedly at my disposal, and I had the privilege of examining and in many cases figuring the Mexican types which it contained. To the authorities of the Berlin and Vienna Museums our thanks are also due for Mexican specimens submitted for identification.

W. L. D.

May 1893.

	Plate.	Fig.	Page.
Loxa variegata	V.	25	71
Murgantia munda	VII.	20	71, 336
—— histrionica	VII.	21	71, 336
Arocera melanopyga	VII.	11	73
—— apta	VII.	12	73, 336
—— schumanni	XXXI.	17	336
—— protea	VII.	18	73, 336
—— affinis *	VII.	19	74, 336
—— altivola	XXXI.	18	337
—— chiriquensis	XXX.	19	337
—— patibulata	VII.	17	74
—— jalapensis	XXX.	18	337
—— splendens	VII.	13	74, 337
—— ——, var.	VII.	14	74
—— rufo-notata	VII.	15	75, 338
Boea costaricensis	XXX.	23	338
Pharypia nitidiventris	VI.	24	77, 338
—— fasciata	VI.	25	77
Nezara stictica	VII.	22	77, 338
—— candens	XXXI.	19	339
—— panamensis	XXXII.	1	339
—— marginata	VII.	23	79, 339
—— majuscula	XXXI.	20	339
—— scutellata	XXXI.	21	339
Banasa varians	VII.	7	80, 340
—— stâlii	VIII.	3	80
—— imbuta	VII.	10	80, 340
—— stigmosa	XXX.	24	340
Pallantia macula	XXX.	22	340
Piezodorus guildingi	VII.	6	81, 341
—— tinctus	XXXI.	22	341
Phineus fusco-punctatus	VII.	8	81
Taurocerus achilles	VII.	24	81
—— edessoides	VII.	25	82, 341
—— abrupta	VIII.	1	82
Phalœcus decoratus	VII.	9	83, 341
Bothrocoris fusco-punctatus	VIII.	5	84
Brachystethus vicinus	VIII.	4	85, 341
—— rubro-maculatus, var.	VIII.	6	85, 342
—— parvus	XXXI.	23	342
Peromatus notatus	VIII.	8	85, 342
—— truncatus	X.	1	86, 342
Edessa laticornis	VIII.	9	87
—— tauriformis	XXX.	25	342
—— costalis	VIII.	10	87, 342
—— taurina	VIII.	11	88, 343
—— intorta	XXXII.	2	343
—— hædina	VIII.	15	88
—— jugata	VIII.	13	88, 343
—— pictiventris	XXXII.	3	343
—— bulbacea	XXXII.	4	343
—— ventralis	VIII.	12	88
—— olivacea	VIII.	14	88, 344
—— nigricornis	VIII.	16	88, 344
—— gentilitia	XXXII.	5	344
Edessa fuscidorsata	IX.	3	89
—— phœnicopus	IX.	2	89
—— tribuaria	XXXII.	6	344
—— bugabensis	XXXII.	7	344
—— salvini	IX.	4	89, 345
—— projecta	XXXII.	8	345
—— pennata	XXXII.	9	345
—— reticulata	VIII.	17	90, 345
—— nigrispina	VIII.	18	90, 345
—— bonasia	VIII.	19	90
—— fuscispina	XXXII.	10	345
—— præcellens	IX.	1	91
—— montezuma	IX.	6	91, 458
—— lindströmi	IX.	5	91
—— jansoni	XXXII.	11	346
—— jurgiosa	IX.	7	92, 346
—— præfacta	XXXII.	12	346
—— junix	VIII.	20	92
—— ——, var.	XXXII.	13	346
—— affinis	IX.	17	92, 347
—— metata	XXXII.	14	347
—— vinula	IX.	13	92, 347
—— stâlii	IX.	14	93
—— lepida	IX.	12	93, 347
—— rixosa	IX.	16	93, 347
—— ——, var. cortesi	IX.	9	93
—— puncticornis	IX.	11	94, 347
—— punctiventris	IX.	15	94
—— trifurca	IX.	10	94, 347
—— pudica	IX.	8	94
—— patricia	VIII.	22	94, 348
—— celsa	XXXII.	15	348
—— irrorata	VIII.	21	95
—— expolita	XXXII.	16	348
—— polymita	XXXII.	17	348
—— collaris	VIII.	23	95, 349
—— picticornis	IX.	18	95
—— mexicana, var.	VIII.	2	95, 349
—— indigena	XXXII.	18	349
—— unicolor	X.	3	95
—— pudibunda	IX.	20	96
—— godmani	IX.	19	96
—— caldaria	XXXII.	19	349
—— cornuta	IX.	22	97, 350
—— cordifera	IX.	23	97, 350
—— densata	XXXI.	24	350
—— sigillata	IX.	24	98, 350
—— conspersa	VIII.	24	98, 350
—— abdita	XXXII.	20	350
—— championi	IX.	21	98
—— petersii	IX.	25	98, 350
—— picata	XXXI.	25	351
—— abdominalis	X.	2	99, 351
—— privata †	VIII.	25	99, 351
Olbia caprina	X.	4	100

* *Arocera protea*, var., on the Plate.

† *Edessa westringii* on the Plate.

	Plate.	Fig.	Page.
Acanthosoma laterale	X.	5	101
Pantochlora vivida	VIII.	7	102, 351
Dinidor rufocinctus	X.	6	103
COREIDÆ.			
Flavius lineaticornis, ♂	X.	7	103
—— ——, ♀	X.	8	103
Hirilcus alternatus, ♂	X.	9	104, 351
—— ——, ♀	X.	10	104, 351
Lycambes varicolor, ♂	XI.	1, 2	105, 351
—— ——, ♀	XI.	3	105, 351
Pachylis pharaonis, var.	X.	11	107
—— hector	X.	12, 13	107, 351
Thasus gigas, ♀	X.	18	108, 351
—— ——, ♂	X.	19	108, 351
—— acutangulus, ♂	X.	16	108, 352
—— ——, ♀	X.	17	108, 352
Melucha bicolor	XXXIII.	1	353
—— quinquelineata	XXXIII.	2	353
Mozena nestor	XI.	5	110, 353
—— scrupulosa	XI.	4	110
—— affinis	XII.	2	110
—— lurida	XII.	1	111, 352
Capaneus multispinus	XI.	6	111
—— achilles	XI.	7	112
—— chontalensis	XXXIII.	3	354
—— auriculatus	XI.	8	112, 354
—— humerosus	XXXIII.	5	354
—— rubronotatus	XI.	9	112, 354
—— vates	XII.	12	112, 354
—— tetricus	XII.	6	112, 354
—— odiosus, ♂	XI.	11	113, 355
—— ——, ♀	XI.	12	113, 355
—— spurcus	XII.	3	113, 355
Archimerus scutellaris, ♂	XI.	13	113, 355
—— ——, ♀	XI.	14	113, 355
—— chiriquinus	XXXIII.	4	355
—— indecorus, ♂	XII.	4	114, 355
—— ——, ♀	XII.	5	114, 355
—— thoracicus, ♂	XII.	7	114
—— ——, ♀	XII.	8	114
Ojedana loricata	XXXIII.	6	356
Mamurius mopsus *	XII.	15	115, 356
Bardistus serrulatus	XXXIII.	7	356
—— formidabilis	XXXIII.	9	357
Nematopus lepidus, ♀	XI.	10	115, 357
—— nigro-annulatus	XII.	14	115, 357
Machtima mexicana	XI.	15	117, 358
Acanthocephala declivis, ♂	XI.	19, 24	118, 358
—— ——, ♀	XI.	21	118, 358
—— ——, var. guatemalena †	X.	14, 15	119, 358
—— ——, var. panamensis, ♂	XI.	22	119, 358
—— declivis, var. panamensis, ♀	XI.	23	119, 358
Acanthocephala subalata, ♂	XI.	20	119
—— granulosa, ♀	XI.	18	120, 359
—— ——, ♂	XII.	9	120, 359
—— luctuosa, ♂	XII.	10	120
—— bicoloripes, ♂	XI.	16	120, 359
—— ——, ♀	XI.	17	120, 359
Stenoscelidea ænescens	XII.	13	121, 359
Laminiceps quadrisignata, ♂	XXXIII.	11	360
Anisoscelis gradadia, ♂	XIII.	1	122, 360
—— ——, ♀	XIII.	2	122, 360
—— affinis	XIII.	3	123, 360
Diactor bogotanus	XXXIII.	8	360
Leptoglossus zonatus	XII.	16	125, 361
—— lineosus	XII.	17	126, 361
—— subauratus	XII.	18	126
Narnia femorata	XIII.	4	127
—— inornata	XXXIII.	10	361
Leptoscelis tricolor	XIII.	5	127, 362
Spartocera granulata	XIII.	6	130, 362
—— gigantea	XXXIII.	13	363
Sephina bicornis	XIII.	7	131
—— geniculata	XIII.	10	132, 363
—— rogersi	XIII.	9	132, 363
—— limbata	XII.	22	132, 363
—— vinula	XII.	23	133, 363
—— dorsalis	XIII.	8	133
Chariesterus alternatus	XIII.	13	133
—— albiventris	XIII.	11	134, 364
—— mœstus	XIII.	12	134, 364
—— robustus	XXXIII.	12	364
—— cuspidatus	XXXIII.	14	364
Plapigus circumcinctus	XIII.	14	134, 364
Staluptus marginalis	XIII.	15	135, 365
Madura perfida	XIII.	16	135, 365
Chelinidea tabulata	XIII.	17	136, 365
Acidomeria rustica	XII.	11	136
Margus inornatus	XIII.	18	137, 365
	XIV.	10	
Namacus annulicornis	XIV.	8	137
Catorhintha mendica	XIII.	21	138, 365
—— selector	XIII.	19	138, 365
Ficana apicalis	XIV.	1	138
Cimolus vitticeps	XIII.	22	139, 366
Anasa uhleri	XIII.	23	141
—— tauriformis	XIV.	6	142, 366
—— montivaga	XXXIII.	19	366
—— notatipennis	XIII.	24	142
—— delibata	XXXIII.	17	367
—— lita	XIII.	25	143
—— decretoria	XXXIII.	16	367
—— litigiosa	XIV.	2	143
—— madida	XIV.	3	143, 367
—— maculipes	XIV.	4	143
—— conspersa	XIV.	5	144
—— capaneodes	XIII.	20	144, 367
—— costalis	XII.	21	144, 367

* *Marmurius mopsus* on the Plate.

† *Acanthocephala alata* on the Plate.

	Plate.	Fig.	Page.
Anasa impictipes	XII.	20	145
—— flavo-vittata	XIV.	7	145, 367
—— mucronata	XIV.	9	145, 367
—— nigripes	XII.	19	145
—— denticulata	XIV.	11	146
—— tenebricosa	XIV.	12	146
—— versicolor	XXXIII.	18	367
Zicca commaculata	XIV.	19	146, 368
—— tæniola	XIV.	13	147, 368
Vilga dallasi	XIV.	16	147
—— mexicana	XXXIII.	20	368
—— dissimilis	XXXIII.	21	369
—— divaricata	XXXIII.	22	369
Collatia emarginata	XIV.	14	148
—— jubata	XIV.	15	148
—— divergens	XIV.	17	148
Nirovecus claviger	XIV.	18	149
Cebrenis centro-lineata	XIV.	22	149, 369
—— robusta	XIV.	20	150, 369
—— modesta	XIV.	21	150
Hypselonotus punctiventris	XIV.	23	150, 370
—— lineatus	XIV.	24	151, 370
—— interruptus, var. bilineatus	XVI.	1	152
—— concinnus	XIV.	25	152, 370
—— ——, var. propinquus	XIV.	26	152
—— atratus	XIV.	27	152, 370
Sphictyrtus pretiosus	XV.	1	153, 371
—— intermedius, var.	XV.	3	153, 371
—— longirostris	XV.	2	154, 371
—— bugabensis	XXXIII.	15	371
Paryphes flavo-cinctus	XV.	4	154, 372
—— imperialis	XV.	5	155
Savius dilectus *	XV.	6	155, 372
—— jurgiosus	XV.	7	155, 372
Hyalymenus pulcher	XV.	8	156, 372
Alydus femoralis	XV.	9	158, 373
Galeottus formicarius	XXXIX.	23	459
Trachelium albo-apicatus	XVI.	2	159, 373
—— tessellatus	XXXIII.	23	373
Cydamus borealis	XV.	11	159, 374
—— inauratus	XXXIII.	24	374
—— deauratus	XXXIII.	25	374
Bactrodosoma elongatum	XXXIX.	27	459
Protenor tropicalis	XVI.	3	160, 374
Darmistus subvittatus	XV.	10	160, 375
Curupira villosa	XXXIX.	24	460
Jalysus mollitus	XVI.	4	163, 375
Parajalysus spinosus	XVI.	5	163, 376
Dasycoris nigricornis	XV.	12	164
Scolopocerus uhleri	XVI.	6	164
Harmostes serratus	XV.	13	166, 376
—— nebulosus	XV.	14	166, 376
—— formosus	XV.	15	167
—— subrufus	XV.	16	167, 377
Harmostes bicolor	XV.	17	167
—— fraterculus	XV.	18	168, 377
—— propinquus	XV.	19	168
Xenogenus extensum	XXXIX.	26	461
Aufeius impressicollis	XV.	20	169, 377
Corizus hyalinus	XVI.	7	169, 377
—— punctatus	XVI.	8	170, 377
—— lateralis	XVI.	9, 10	170, 377
—— pictipes	XV.	24	171, 378
—— ——, var. †	XV.	25	171
—— ventralis	XV.	23	171, 378
Jadera obscura ‡	XV.	21	172, 378
—— hæmatoloma	XVII.	5	173, 378
—— æola	XV.	22	173, 378
LYGÆIDÆ.			
Oncopeltus gutta §	XVI.	22	174, 378
—— sexmaculatus	XVII.	1	174, 379
—— varicolor	XVI.	21	174, 379
—— ——, var. stålii	XVI.	20	175
—— cingulifer	XVI.	24, 25	175, 379
—— fasciatus	XVI.	23	176, 379
Lygæus kalmii	XVII.	2	178, 380
—— ruficeps	XVII.	3	179, 380
—— trux	XVI.	19	179
—— truculentus	XVII.	4	179, 380
—— bicolor	XVI.	17	180, 380
—— albulus	XXXIV.	2	380
—— uhleri	XVI.	12	181, 381
—— guatemalanus	XVIII.	2	181
—— pyrrhopterus	XVII.	6	182
—— dispar	XVIII.	5	182
—— thoracicus	XVI.	16	182
—— plagiatus	XVIII.	11	182
—— pallido-cinctus	XVI.	11	183, 381
—— conjunctus	XVIII.	3	183
—— pallescens	XVII.	7	183, 381
—— ——, var.	XVII.	10	183
—— interstinctus	XVII.	8	183
—— cruentatus	XVII.	9	184, 382
—— venosus	XVI.	18	184, 382
—— teapensis	XXXIV.	1	382
—— verecundus	XVIII.	6	185, 382
—— nigrinervis	XVIII.	7	185, 382
—— bicrucis	XVI.	14, 15	185, 382
—— nigriguttulus	XVII.	11	186, 383
—— circumlinitus	XVII.	13	186
—— circumlitus	XVI.	13	186, 383
—— circumplicatus	XVIII.	4	186, 383
—— rubriger	XVII.	12	187, 383
—— lateralis	XVIII.	1	187
—— vittiscutis	XVII.	14	187, 383

* *Savius delectus* on the Plate.

† *Corizus luteolus* on the Plate.

‡ *Jadera lateralis* on the Plate.

§ *Oncopeltus guttas* on the Plate.

	Plate.	Fig.	Page.
Lygæus consanguinitas	XVIII.	12	187
—— variegatus	XVIII.	9	188
—— aureus	XVIII.	13	188
Acroleucus subniger	XVIII.	10	188
—— nigellus	XXXIV.	3	383
—— sceleratus	XXXIV.	4	384
—— rubefactus	XXXIV.	5	384
—— delineatus	XXXIV.	6	384
—— brevicollis	XVII.	15	189, 384
—— tullus	XVII.	16	189
—— vicinalis	XVIII.	8	189
Nicuesa speciosus	XXXIV.	7	385
Nysius (?) monticola	XXXIV.	8	385
—— (?) ementitus	XXXIV.	9	385
Belonochilus mexicanus	XXXIV.	10	386
Ninus notabilis	XIX.	4	191, 386
Neoninus illustris	XIX.	5	192, 386
Ischnorhynchus punctatus	XXXIV.	11	386
—— championi	XIX.	3	193, 387
—— thoracicus	XXXIV.	12	387
—— godmani	XIX.	1	193
—— salvini	XIX.	2	194
Mayana costata	XXXIV.	13	388
Ninyas strabo	XIX.	6	194
—— torvus	XXXIV.	14	388
Enciscoa inermis	XXXIV.	15	389
—— acuminatus	XXXIV.	16	389
—— mucronatus	XXXIV.	17	389
Cymus mexicanus	XXXIV.	18	390
—— guatemalanus	XXXIV.	19	390
Ischnodemus præcultus	XIX.	7	196, 391
—— cahabonensis	XXXIV.	20	391
—— umbratus	XXXIV.	21	391
Toonglasa forficuloides	XXXIV.	22	392
Geocoris imperialis	XVIII.	18	197
—— flavilineus	XVIII.	19	198, 392
—— thoracicus, var.	XVIII.	15, 16	198
—— lividipennis	XVII.	27	198, 392
—— punctipes, var.	XVIII.	14	198, 392
—— borealis	XVIII.	17	199, 392
Pachygrontha œdancalodes	XVII.	17	200, 393
—— bimaculata	XXXIV.	23	393
Acolhua championi	XXXIV.	24	394
Davila concavus	XXXV.	1	394
—— consanguineus	XXXV.	2	395
—— pallescens	XXXV.	3	395
Ligyrocoris multispinus	XVII.	18	201, 395
—— litigiosus	XVII.	19	201, 396
—— delitus	XVIII.	20	201
—— oblitus	XIX.	9	202
—— balteatus	XVII.	20	202
—— abdominalis	XVII.	21	202, 396
—— infumatus	XIX.	8	202
Perigenes dispositus	XXXIV.	25	396
Myodocha longicollis	XVII.	22	203, 396
—— giraffa	XVII.	23	204, 397
Myodocha unispinosa	XVIII.	22	204, 397
—— inermibus	XVIII.	23	204, 397
Heræus eximius*	XVIII.	21	204
—— percultus	XIX.	10	205
—— guttatus, var.	XIX.	11	205
Catenes porrectus	XXXV.	4	397
Pamera longula	XVII.	26	206, 398
—— parvula	XIX.	12	206, 398
—— vicinalis	XIX.	13	207, 398
—— bilobata	XVII.	25	207, 398
—— ——, var. dallasi	XIX.	14	208, 398
—— vivida	XIX.	15	208
—— globiceps	XIX.	16	208, 399
Pseudopamera aurivilliana	XX.	8	209
—— forreri	XXXV.	5	399
Plociomera oblonga	XVII.	24	209, 399
—— formosa	XIX.	25	210, 399
—— cæca	XIX.	24	210, 400
—— albo-maculata	XXXV.	6	400
Cholula variegata	XIX.	17	211, 400
—— discoloria	XXXV.	7	400
—— bicolor	XIX.	18	211
Erlacda (?) insititia	XXXV.	8	401
Pephysena levis	XVIII.	24, 25	211, 401
—— insignis	XX.	9	212
Prytanes globosus	XXXV.	9	401
—— ater	XXXV.	10	402
Sisamnes contractus	XXXV.	11	402
Bathycles maculatus	XXXV.	12	403
Neocattarus firmus	XIX.	19	213
—— vegetus	XIX.	20	214
—— thoracicus	XXXV.	13	403
—— vigens	XIX.	21, 22	214, 403
—— parvus	XX.	1	215, 403
—— gracilis	XX.	2	215, 403
—— maculatus	XXXV.	14	403
—— (?) irrorandus	XXXV.	15	404
Cæneus notitius	XXXV.	16	404
Scythinus splendens	XXXV.	17	405
Cligenes distinctus	XXXV.	18	405
Salacia (?) picturata	XXXV.	19	406
—— (?) delineata	XXXV.	20	406
—— (?) punctata	XXXV.	23	406
Rhyparochromus plenus	XIX.	23	216, 407
Trapezonotus caliginosus	XX.	3	216
Trapezus trimaculatus	XX.	4	217
—— fasciatus	XX.	5	217
Petissius assimilandus	XXXV.	21	407
—— (?) diversus	XXXV.	22	407
Eremocoris tropicus	XX.	7	218
—— germanus	XXXV.	24	407
Balboa variabilis	XXXV.	25	408
Gonatas typicus	XX.	6	219, 408
—— divergens	XX.	10	219, 409
Dorachosa illuminatus	XXXVI.	1	409

* *Heræus eximus* on the Plate.

	Plate.	Fig.	Page.
Bubaces castaneus	XXXVI.	2	409
Rhaptus collina	XXXVI.	3	410
Esuris purpurata	XXXVI.	4	410
Peliopelta tropicalis	XXXVI.	5	411
PYRRHOCORIDÆ.			
Largus subligatus	XX.	11	221, 411
—— affinis	XX.	12	222
—— convivus	XX.	13, 14	222, 411
—— longulus	XX.	15	223
—— cinctus	XX.	16–19	223
—— bipustulatus	XX.	20, 21	223
Fibrenus globicollis	XX.	24, 25	224, 412
—— gibbicollis	XXI.	1	224, 412
Theraneis pulchra	XXII.	1	225, 412
—— dissimilis	XXI.	24	225
Stenomacra marginella, var.	XX.	23	226, 412
—— cliens	XX.	22	226, 413
Phæax formicarius	XXXVI.	6	413
—— balteatus	XXXVI.	7	413
Renodæus ficarius	XXXIX.	25	462
Arhaphe cicindeloides	XXI.	2	227
Japetus sphæroides *	XXI.	3	227
Pyrrhocoris apterus	XXI.	25	228, 414
Dysdercus mimus, var.	XXI.	4	229, 414
—— albidiventris, var.	XXI.	5, 10	229, 414
—— flavo-limbatus	XXI.	6	230, 414
—— obscuratus	XXI.	8, 9	230, 415
—— incertus	XXI.	7	230
—— concinnus, var.	XXI.	11, 12, 15	231, 415
—— splendidus	XXI.	14	231
—— oncopeltus	XXI.	13	232
—— obliquus	XXI.	16, 17, 18	232, 415
—— chiriquinus	XXI.	22	232, 415
—— capitatus	XXI.	21	233, 415
—— ruficollis, var.	XXI.	19, 20	233, 415
—— ruficeps	XXI.	23	234

	Plate.	Fig.	Page.
CAPSIDÆ.			
Miris panamensis	XXXVI.	8	415
—— roseus	XXIII.	20	236
Eioneus bilineatus	XXXVI.	9	416
Creontiades rubrinervus †	XXIII.	12	237, 416
Minytus argillaceus	XXIV.	1	238
—— bicolor	XXXVI.	10	416
Collaria oleosa ‡	XXIV.	2	238, 417
Xenetus lanuginosus	XXIV.	3	239, 417
—— bracteatus	XXIV.	4	240
Zacynthus staphyliniformis §	XXIV.	5	240, 418
Zosippus inhonestus	XXIV.	6	241
—— fœdus	XXXVI.	11	418
—— gibbus	XXXVI.	12	418
Herdonius (?) panamensis	XXXVI.	13	419
Lygdus simulans	XXIV.	16	242
—— mimicus	XXXVI.	14	419
Piasus illuminatus	XXIV.	17	242, 419
Cylapus famularis ‖	XXIV.	7	243, 420
—— funebris ¶	XXIV.	8	244, 420
—— stygius **	XXIV.	9	245, 420
—— picatus	XXXVI.	15	420
—— rugosus ††	XXIV.	10	245, 421
Jobertus chryselectrus	XXXVI.	16	421
Vannius rubrovittatus	XXIV.	11	246
Monalonion annulipes, var.	XXIII.	25	246, 422
—— versicolor	XXIV.	12	247
—— hilaratum	XXIV.	13	247
—— atratum	XXIV.	14	247
—— dissimulatum	XXIV.	15	247
Orasus robustus	XXIII.	13	248
Sysinas linearis	XXIII.	21	248
—— audens	XXIV.	25	249, 422
—— centralis	XXV.	7	249
—— floridulus	XXIV.	24	249, 422
Zoilus rubromaculatus ‡‡	XXV.	8	250, 422
—— luteofasciatus §§	XXV.	9	250, 422
—— marginatus	XXXVI.	18	422
—— guerreroensis	XXXVI.	17	422
—— fuligineus	XXXVI.	19	423
Admetus fimbriatus	XXV.	10	250
Ofellus præstans	XXV.	11	251
Ranzovius crinitus	XXXVI.	20	423
Resthenia plagigera	XXIV.	18	251, 424
—— montana	XXV.	1	252
—— picticollis	XXII.	2	252
—— trujilloi	XXXVI.	21	424
—— pullata ||||	XXII.	3	252

* *Japeltus sphæroides* on the Plate.

† *Megacœlum rubrinerve* on the Plate.

‡ *Trachelomiris oleosus* on the Plate.

§ *Zacorus staphyliniformis* on the Plate.

‖ *Valdasus famularis* on the Plate.

¶ *Valdasus funebris* on the Plate.

** *Valdasus stygius* on the Plate.

†† *Valdasus rugosus* on the Plate.

‡‡ *Zopyrus rubromaculatus* on the Plate.

§§ *Zopyrus luteofasciatus* on the Plate.

|||| *Resthenia candens* on the Plate.

	Plate.	Fig.	Page.
Resthenia luteigera	XXIV.	19	252
—— melanochra	XXII.	4	252
—— ornaticollis	XXII.	5	253, 424
—— panamensis	XXV.	6	253
—— latipennis	XXII.	6	253, 424
—— ——, var.	XXII.	7	253
—— ——, var. univittata *	XXV.	2	253, 424
—— chiriquina	XXV.	3	253
—— obscurans	XXV.	4	254
—— högbergi	XXIV.	20	254
—— schumanni	XXXVI.	22	425
—— accincta	XXXVI.	23	425
—— pannosa	XXXVI.	24	425
—— guatemalana	XXV.	5	255
—— sudatus	XXII.	17	256
—— bivittis	XXIV.	21	256
—— vitticeps	XXIV.	22	256, 425
—— vittifrons	XXIV.	23	257, 426
—— teapensis	XXXVI.	25	426
—— persignanda	XXII.	21	257, 426
—— exornata	XXII.	20	257, 426
—— intercidenda	XXXVII.	1	426
—— thoracica	XXII.	14	257
—— interpuncta	XXII.	15	257
—— marginanda	XXII.	16	258
—— parva	XXII.	18	258
Lopidea scitula	XXIII.	23	258, 426
—— mexicana	XXXVII.	2	426
—— bicolor	XXXVII.	3	427
Hadronema militaris	XXII.	23	259
Compsocerocoris dubitatus	XXV.	12	260
—— præsignis	XXXVII.	4	427
—— vilis	XXV.	13	260
—— elegans	XXV.	14	261
—— mistus	XXV.	15	262, 427
Tædia bimaculata	XXV.	16	262
Neurocolpus mexicanus	XXIII.	5	262, 427
Pœas reuteri	XXXVII.	5	428
Paracalocoris jurgiosus	XXV.	17	263, 428
—— fistulosus	XXII.	11	264, 428
—— molliculus	XXV.	18	265, 428
—— balteatus	XXV.	19	265
—— lunatus	XXV.	20	265, 428
—— mastrucatus	XXV.	21	265
—— bivittatus	XXXVII.	6	429
Pappus sordidus	XXV.	22	266
—— insignis	XXXVII.	7	429
—— egens	XXXVII.	8	429
Garganus albidivittis	XXV.	23	266, 429
—— splendidus	XXXVII.	9	429
Jacchinus tabascoensis	XXXVII.	10	430
Calocoris fasciaventris	XXV.	24	267
—— tinctus	XXII.	8	267
—— semiopacus	XXII.	9	267
—— opacus	XXII.	10	267

	Plate.	Fig.	Page.
Calocoris nigricans	XXII.	22	267, 430
—— (?) canus, ♂	XXXVII.	11	430
—— ——, ♀	XXXVII.	12	430
—— (?) inustus	XXIII.	17	267
Calondas superbus	XXIII.	22	268
—— fasciatus	XXVI.	1	268
—— testaceus	XXVI.	2	269
Megacœlum (?) signatum	XXIII.	11	269
—— (?) sanguinolentum	XXXVII.	13	431
Proba gracilis	XXVI.	3	269, 431
—— ——, var.	XXV.	25	269
Paraproba fasciata	XXVI.	4	270, 431
—— pallescens	XXVI.	5	270
Neoproba rubescens	XXVI.	6	270
—— varians	XXVI.	7	271
—— notata	XXXVII.	14	432
Pandama præclara	XXVI.	8	271, 432
—— aurea	XXXVII.	15	432
Lygus pratensis, var.	XXIII.	4, 6, 7, 16	272, 432
—— tactus	XXVI.	9	273
—— tribulis	XXVI.	10	273, 432
—— tactilis	XXXVII.	16	432
—— panamensis	XXXVII.	17	433
—— sallæi	XXIII.	2	273, 433
—— ——, var.	XXIII.	3	273
—— uvidus	XXXVII.	18	433
—— vinaceus	XXVI.	11	273
—— inspersus	XXIII.	8	274
—— sparsus	XXXVII.	19	434
—— distanti †	XXIII.	9	274, 434
—— ——, var.	XXIII.	18	274
—— cristatus	XXIII.	10	274, 434
—— pellitus	XXXVII.	20	434
—— hospitus	XXXVII.	21	434
—— ordinatus	XXXVII.	22	435
—— lanuginosus	XXXVII.	23	435
—— cuneatus	XXXVII.	24	435
Pœcilocapsus alacer	XXIII.	1	275
—— frumentarius	XXVI.	12	275
—— nigriger, var.	XXII.	12, 13	275, 435
—— ornatulus, var.	XXVII.	1–4	276, 435
—— mollis	XXXVII.	25	436
—— scutellatus	XXXVII.	26	436
Rhasis amplificatus	XXXVIII.	1	436
Neoborus saxeus	XXVII.	5	276
—— scaber	XXVII.	6	276
—— fasciatus	XXXVIII.	2	436
—— hirsutus	XXVII.	7	276, 437
—— crassus	XXXVIII.	3	437
—— manifestus	XXXVIII.	4	437
—— funereus	XXXVIII.	5	437
Eubatas chiriquinus	XXVII.	8	277
Neocapsus mexicanus	XXII.	19	277

* *Resthenia univittata* on the Plate.

† *Lygus scutellatus* on the Plate.

	Plate.	Fig.	Page.
Neocapsus cuneatus	XXXVIII.	6	438
Horcias variegatus	XXVI.	13	277
—— notatus	XXVI.	14	278
—— chiriquinus *	XXVI.	15	278, 438
—— mexicanus	XXXVIII.	7	438
—— decoratus	XXVII.	9	278, 438
—— plagosus	XXVI.	16	279, 438
—— plausus	XXXVIII.	8	438
—— plumatus	XXVII.	10	279
—— rutilus	XXVII.	11	279
—— unicolor	XXVII.	12	279
Calocorisca villosa	XXVI.	17	280
—— thoracica	XXVII.	13	280
—— tenera	XXVI.	18	280
—— tenebrosa	XXXVIII.	9	439
—— chontalensis	XXXVIII.	10	439
—— antennata	XXVII.	14	281
Cimatlan delicatum	XXVII.	15	281
—— minuens	XXXVIII.	11	439
—— pertingens	XXXVIII.	12	439
Fulvius anthocorides	XXIII.	15	281, 440
—— albomaculatus	XXVII.	16	282
—— fuscans	XXVII.	17	282, 440
—— atratus	XXVII.	18	282, 440
Henicocnemis albitarsis	XXVII.	19	283
—— albo-ornata	XXVII.	20	283
Eccritotarsus generosus	XXII.	24	284
—— vultuosus	XXXVIII.	13	440
—— genetivus	XXII.	25	284
—— splendens	XXVIII.	1	284, 440
—— vestitus	XXVIII.	2	284
—— mundulus	XXIII.	19	285
—— pallidirostris	XXIII.	14	285, 440
—— incurvus	XXVI.	19	285, 440
—— porrectus	XXXVIII.	15	441
—— impavidus	XXXVIII.	14	441
—— atratus	XXVI.	20	285, 441
—— perobscurus	XXXVIII.	16	441
—— marginatus	XXXVIII.	17	442
—— procurrens	XXXVIII.	18	442
Pseudobryocoris bicolor	XXVIII.	3	286
Monalocorisca granulata	XXVIII.	4	286
—— tuberculata	XXXVIII.	19	442
—— ravida	XXVIII.	5	286
—— lineata	XXXVIII.	20	443
—— laterata	XXXVIII.	21	443
—— emissitia	XXXVIII.	22	443
—— colorata	XXXVIII.	23	443
—— scutellata	XXXVIII.	24	444
Carmelus lunatus †	XXVIII.	6	287, 444
—— parvus ‡	XXVIII.	7	287, 444
Carmelus fasciatus	XXXVIII.	25	444
—— sanguineus	XXXIX.	1	444
Pseudocarnus lineolatus	XXVIII.	8	288
—— magnus	XXVIII.	9	288
Paracarnus elongatus	XXVIII.	25	289
—— mexicanus	XXXIX.	2	445
Neocarnus vitreus	XXIX.	1	289
Annona bimaculata, var. §	XXVII.	25	290, 445
—— decoloris ‖	XXVI.	23	290, 446
—— labeculata	XXXIX.	3	446
Fundanius maculatus	XXVIII.	10	291
—— pallescens	XXVIII.	11	291
—— albo-maculatus	XXVIII.	12	291
Neofurius villosus	XXVIII.	13	292
—— pollutus	XXXIX.	4	446
—— auratus	XXVIII.	14	292
—— amethystus	XXVIII.	15	293
—— scriptus	XXVIII.	16	293
—— tabascoensis	XXXIX.	5	446
—— pictus, var. ¶	XXIII.	24	293
—— decoratus	XXVIII.	17	294
—— infumatus	XXVIII.	18	294
—— hieroglyphicus	XXVIII.	19	294
—— pallidulus	XXVIII.	20	295
—— marginatus	XXXIX.	6	446
—— plagosus	XXVIII.	21	295
—— linearis	XXVIII.	22	295
Bibaculus modestus	XXVIII.	23, 24	296
Mala unicolor	XXVI.	21	296
—— ornata	XXVI.	22	296
Neosilia viduata **	XXVII.	21	297
—— sororia	XXIX.	2	297
—— cineracea ††	XXVII.	22	297
—— pulchra	XXXIX.	7	447
Chius maculatus	XXVII.	23	297
Parachius luteolus	XXVII.	24	298
Falconia poetica	XXIX.	3	298
—— caduca	XXIX.	4	298
Antias subæratus	XXIX.	5	299
—— aheneus	XXIX.	6	299
Fuscus crinitus	XXIX.	7	299
Neoleucon horribilis	XXVI.	24	300, 447
Spartacus albatus	XXVI.	25	300
Trygo imitationis	XXIX.	8	300
Jornandes championi	XXIX.	9	301
—— præustus	XXXIX.	8	447
—— punctatus	XXXIX.	9	448
—— subalbicans	XXXIX.	10	448
—— cruralis	XXXIX.	11	448
—— dissimulans	XXXIX.	12	448

* *Horcias thoracicus* on the Plate.

† *Carnus lunatus* on the Plate.

‡ *Carnus parvus* on the Plate.

§ *Ania bimaculata* on the Plate.

‖ *Mala decoloris* on the Plate.

¶ *Furius pictus* on the Plate.

** *Silia viduata* on the Plate.

†† *Silia cineracea* on the Plate.

	Plate.	Fig.	Page.		Plate.	Fig.	Page.
Jornandes vulgaris	XXXIX.	13	448	Cyrtocapsus caligineus *	XXIX.	11	302, 450
—— intermedius	XXXIX.	14	449	Eurotas nodosus	XXIX.	12	303
—— semirasus	XXXIX.	15	449	Auchus foliaceus	XXXIX.	18	451
—— lautus	XXXIX.	16	449	Lampethusa anatina	XXIX.	13	303, 451
Ficinus sagittarius	XXXIX.	17	450	Demarata villosa	XXIX.	14	303, 451
Florus insolitus	XXIX.	10	301	—— mirifica	XXXIX.	19	451

* *Pirithous pallipes* on the Plate.

ERRATA ET CORRIGENDA.

Page	Line	
6	20	*for* Matamoras *read* Matamoros.
7	26	*for* **rufifrons** *read* **rugifrons.**
7	27, 28	for *rufifrons* read *rugifrons.*
35	8	*for* Ellenberger *read* Ellenrieder.
43	22	*for* **Crytocoris** *read* **Cyrtocoris.**
46	19	*for* Demarara *read* Demerara.
53	18	for *Eysacoris* read *Eysarcoris.*
56	33	for *Petatoma* read *Pentatoma.*
59	33	for *Thiene* read *Thième.*
59	34	*for* **Euchistus** *read* **Euschistus.**
68	28	*for* Pancina *read* Panima.
69	25	*for* Pancina *read* Panima.
77	21	*before* Öfv. *insert* Stål.
82	9	for *Avelius* read *Arvelius.*
83	12	*for* Cubilquitz *read* Cubilguitz.
84	2	*for* Pancina *read* Panima.
108	10	*for* 18♂, 19♀ *read* 18♀, 19♂.
137	11	*after* fig. 18, *insert* ; Tab. XIV. fig. 10.
137	20	*for* Chapultepek *read* Chapultepec.
149	29	*for* Chapul *read* Chapultepec.
153	5	*for* **proxima** *read* **proximus.**
158	38	for *Micelytrida* read *Micrelytrida.*
180	13	*for* Takubaya *read* Tacubaya.
193	13	*for* Chapultepek *read* Chapultepec.
194	13	for GUATEMALA read PANAMA.
205	27	*for* **guttata** *read* **guttatus.**
214	41	*for* Chiacaman *read* Chiacam.
218	4	for *Ganianotaria* read *Gonianotaria.*
219	39	*for* GUATEMALA *read* PANAMA.
220	10	for *E.* read *G.*
223	22	*for* Antiochia *read* Antioquia.
227	9	*after* JAPETUS *insert*, gen. nov.
231	8	*for* Cornuvacca *read* Cuernavaca.
259	28	*for* PHYTOCARIA *read* PHYTOCORARIA.
259	29	for *Phytocaria* read *Phytocoraria.*
268	26	*for* Zumbador *read* Tumbador.
278	16	(Tab. XXVI. fig. 15) should be transferred to line 25, after **chiriquinus,** n. sp.
287	37	*for* Aittlan *read* Atitlan.
301	24	*for* La *read* Las.
394	1	*for* **apicornis** *read* **apicicornis.**
394	2	for *apicornis* read *apicicornis.*
422	6	*for* 247 *read* 249.

The abbreviations n. sp. should be placed after the names of various new species described on pp. 182, 204, 209, 248, 257, 258, 277, 279, 282, 289, 293, 335, 346, 347.

BIOLOGIA CENTRALI-AMERICANA.

ZOOLOGIA.

Class INSECTA.

Order RHYNCHOTA.

Suborder HEMIPTERA-HETEROPTERA.

Fam. PENTATOMIDÆ.

Subfam. *CYDNINÆ.*

Cydnina, Stål, En. Hem. v. p. 17 (1876).

This subfamily, as founded by Stål, includes the genus *Thyreocoris*—which, under the name of *Corimelæna*, White, was placed by Dallas in his family Odontoscelidæ, and is still kept apart by Prof. Uhler (who has recently written a Monograph of his family Cydnidæ as found in North America) in another family he retains under the name of "Corimelænidæ."

Of the genera at present described, the majority belong to the Nearctic and Neotropical Regions, of which about two thirds only have as yet been recorded from Central America. These calculations, however, are exceedingly tentative, although both Stål and Prof. Uhler appear to have had almost all available specimens in their hands when pursuing their generic revisions.

LOBOSTOMA.

Lobostoma, Amyot & Audinet-Serville, Hém. p. 87 (1843); Dall. List Hem. i. p. 110.

This genus contains two species, one of which is only known from Central America. It is easily recognized by the great dilatation of the second joint of the rostrum.

1. **Lobostoma gigantea.**

Cydnus giganteus, Burm. Handb. ii. 1, p. 375. 8[1].

Lobostoma giganteum, A. & S. Hém. p. 88. 1, pl. 2. f. 6[2]; Dall. List Hem. i. p. 111. 1[3]; Stål, En. Hem. v. p. 18[4]; Berg, Hem. Argent. p. 9 (1879)[5].

Hab. HONDURAS[3].—COLOMBIA[3]; BRAZIL[1 2 3 4].

CYRTOMENUS.

Cyrtomenus, Amyot & Audinet-Serville, Hém. p. 90 (1843); Dall. List Hem. i. p. 110; Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 367.

All the species of this genus which have been described are, with one exception, from the Nearctic and Neotropical Regions. The exception is *C. insignis*, Voll., from the Malayan Archipelago, which, however, on examination, will probably not prove strictly congeneric.

The triangular scutellum, the submarginal bristles to the head, the convex body, and stout and thickly spined tibiæ are well-marked characteristics of this genus.

Some of these characters are liable to obliteration, as Prof. Uhler writing of one species says:—"Many of the specimens which I have inspected show conspicuously the results of wear upon the bristles of the head and teeth of the fore tibiæ. In two individuals these appendages were entirely broken off and the bases worn."

1. **Cyrtomenus grossus.** (Tab. II. fig. 14.)

Cyrtomenus grossus, Dall. List Hem. i. p. 111. 2[1].
Cyrtomenus grossus (??), Stål, Stett. ent. Zeit. xxiii. p. 95. 45[2].

Hab. Mexico[2]; Costa Rica, Irazu (*Rogers*).—Colombia[1].

The Central-American specimens vary only in their smaller size from the types in the British Museum; and I have had the opportunity of examining the specimens in the collection of Dr. Signoret which were identified by Stål with doubt as the above. The specimen figured is from Costa Rica.

2. **Cyrtomenus teter.** (Tab. II. fig. 13.)

Cydnus teter, Spin. Ess. p. 332[1].
Cyrtomenus teter, Dall. List Hem. i. p. 111. 1[2].

Hab. Costa Rica, San Francisco (*Rogers*).—Brazil[1 2].

The specimen figured is from Costa Rica, and was compared and identified for me by Dr. Signoret. It, however, seems to differ slightly from Spinola's description, that author describing the pronotum as being "sans impressions transverses."

3. **Cyrtomenus excavatus,** n. sp. (Tab. II. fig. 12.)

Above pitchy, shining, ovate; sides, legs, and rostrum clothed with bristles. Head rugose, rounded, emarginate in front, central lobe not reaching anterior margins of lateral lobes. Eyes reddish; ocelli bright shining yellow. Antennæ with the second joint shorter than the third, fourth petiolar at base; first, second, and third joints testaceous, fourth and fifth pitchy. Pronotum with a large excavation, deepened posteriorly, extending from anterior margin, immediately behind the head and between the eyes, backwards to a distinct transverse punctured impression which crosses the pronotum about midway. The excavated space is anteriorly punctured and finely wrinkled, and posteriorly smooth and sparingly punctured; it is also somewhat narrowed and rounded behind, and has a small basal, central, elevated ~-shaped stria. Remainder

of the pronotum somewhat sparingly punctured. Scutellum with a few deep punctures, and very faintly and transversely wrinkled towards apex. Corium rather finely and thickly punctured; membrane ochraceous, posterior margin pale yellow. Body beneath concolorous, finely and sparingly punctured. Rostrum reddish brown. Legs pitchy brown, tarsi somewhat paler.

Long. 12 millim., lat. 7 millim.

Hab. Costa Rica, Irazu, 6000 to 7000 feet (*Rogers*).

Allied to *C. teter*, Spin., but at once distinguished by the large excavation of the pronotum.

Note.—The figure does not sufficiently show the punctuation of the pronotum and scutellum.

4. Cyrtomenus mirabilis.

Cydnus mirabilis, Perty, Del. p. 166.

Cydnus mutabilis, Perty, Del. t. 33. f. 6; Burm. Handb. ii. p. 375. 9.

Cyrtomenus castaneus, A. & S. Hém. p. 91. 1[1]; Stål, En. Hem. pt. v. p. 18[2].

Cyrtomenus mutabilis, Dall. List Hem. pp. 112. 33[3]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 275, iii. p. 367[4].

Cyrtomenus mirabilis, Stål, En. Hem. pt. 5. p. 18[5]; Berg, Hem. Argent. p. 10[6].

Cyrtomenus crassus, Walk. Cat. Het. i. p. 147[7].

Var. *Cyrtomenus obtusus*, Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 369[8].

Hab. North America [1 2 4 8].—Mexico [8], Vera Cruz [7].—Colombia [3]; Brazil [3 5]; Argentine Rep. [6].

I have followed Prof. Uhler in placing *C. castaneus*, A. & S., as a synonym of this species, though Stål, who is seldom in error, considered it distinct. I do so because Prof. Uhler has had so many specimens through his hands, and also from the examination of other specimens kindly lent me by Dr. Signoret. Prof. Uhler, however, seems to have fallen into confusion as to the habitat of this species. In 1875 he records it as from Texas[4]; in 1877 he writes[8]:—"This species has not yet been brought from Texas or the region west of the great plains, unless the next species (*C. obtusus*) shall prove to be a form of it. The differences separating them seem ample; but long series from many localities may yield the intermediate links." It is at least remarkable if *C. mutabilis*, recorded as it is by Prof. Uhler[4] as from South Carolina, Georgia, Florida, Guiana, and Brazil, should yet be absent in the intervening region of Central America, whilst he gives Mexico as a habitat for his *C. obtusus*. Berg also describes it as a very variable species in South America.

SYLLOBUS.

Syllobus, Signoret, Bull. Soc. Ent. Fr. (in litt.).

Dr. Signoret has forwarded me a copy of his description of this genus (in proof), with the date December 1879. It is founded for the reception of the *Cyrtomenus emarginatus*,

Stål, upon the following principal characters:—"Les lobes latéraux de la tête réunis au delà du médian et formant deux lobules arrondis réfléchis, les bords d'abord convexes près des yeux, puis concaves, sinués à l'extrémité; les antennes avec le second article très-court. Canal ostéolaire terminé par un lobe irrégulier présentant une dent en dessous."

1. **Syllobus emarginatus.** (Tab. III. fig. 6.)

Cyrtomenus emarginatus, Stål, Stett. ent. Zeit. xxiii. p. 95 (1862)[1].
Syllobus emarginatus, Sign. Bull. Soc. Ent. Fr. (in litt.).

Hab. Mexico[1].

This seems to be a somewhat rare form, especially out of Mexico. I have not hitherto seen it in collections from Guatemala, Honduras, Nicaragua, Costa Rica, or Panama. The specimen figured is in the possession of Dr. Signoret.

ÆTHUS.

Æthus, p., Dallas, List Hem. i. pp. 110 et 112 (1851); Stål, Hem. Afr. i. pp. 19 et 20; Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 378.

This genus as at present restricted is mostly represented in the Ethiopian and Oriental Regions. Prof. Uhler records one species from the Nearctic Region. I retain the following species in the genus, as agreeing with Stål's diagnosis, though that author enumerated no American representatives. "Corporis marginibus pilis vel setis sat numerosis ciliatis; capite intra marginem anticum spinulis vel setis brevibus rigidis sæpissime instructo." The scutellum is also triangular and narrowed at tip.

1. **Æthus nitidulus.** (Tab. III. fig. 3.)

Æthus nitidulus, Walk. Cat. Het. i. p. 154[1].

Hab. British Honduras, Belize[1].

The figure is from the type and only specimen in the British Museum.

RHYTIDOPORUS.

Rhytidoporus, Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 380 (1877).

This genus is allied to those with the scutellum triangular and narrow at the tip; the head is furnished with a very obscure submarginal row of small erect teeth and fine bristles; the ostiolar canal is short, narrow, and subfusiform. It contains but one species.

1. **Rhytidoporus indentatus.** (Tab. IV. fig. 9.)

Rhytidoporus indentatus, Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 380[1].

Hab. Southern Florida[1].—Mexico (*Mus. Berol.*).—Cuba[1].

I am indebted to Dr. Signoret for a comparison and identification of this species. It is smaller than the specimens described by Prof. Uhler as measuring $5\frac{1}{2}$ to $6\frac{1}{2}$ millims., the Mexican specimen figured being but $4\frac{1}{2}$ millims. in length.

STENOCORIS.

Stenocoris, Sign. (in litt.).

Dr. Signoret informs me that he has founded the above genus, "basé sur la longueur du rostre et de la tête," for the reception of the following species. It is somewhat allied to the genus *Geotomus.*

1. **Stenocoris longulus.** (Tab. IV. fig. 10.)

Æthus longulus, Dall. List Hem. i. p. 119. 23[1]; Stål, En. Hem. pt. v. p. 26. 13.

Hab. MEXICO (*Mus. Berol.*); GUATEMALA.—N. BRAZIL, Para[1].

PANGÆUS.

Pangæus, Stål, Stett. ent. Zeit. xxiii. p. 95 (1862); Uhler, Bull. U.S. Geol. & Geog. Surv. iii. pp. 367 & 383.

This genus is confined to the Nearctic and Neotropical Regions, and is well represented in Central America.

Its principal characters are, scutellum triangular and narrowed at the apex, and the head without, or almost without, submarginal bristles; pronotum with an "impressed sinuated antero-marginal line."

1. **Pangæus margo.** (Tab. II. fig. 15.)

Æthus margo, Dall. List Hem. i. p. 116. 12[1].

Pangæus margo, Stål, Stett. ent. Zeit. xxiii. p. 95[2]; Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 387[3].

Hab. N. AMERICA, Arizona[3].—MEXICO[2 3], Oaxaca (*Mus. Berol.*); GUATEMALA, Zapote (*Champion*); NICARAGUA, Chontales (*Janson*).—COLOMBIA; N. BRAZIL, Para (*coll. Dist.*).

This species has always a more or less distinct, sharp, linear, longitudinal and central impression on the anterior half of the pronotum, extending backwards from the fore border, but not reaching the transverse impression. This character, however, is but faintly defined in some specimens; and those from Mexico which have passed through my hands have been castaneous in coloration, and not piceous as is the case with more southern forms. The specimen figured is from Guatemala.

2. **Pangæus piceatus.** (Tab. II. fig. 18.)

Pangæus piceatus, Stål, Stett. ent. Zeit. xxiii. p. 96. 48[1]; Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 388[2].

Æthus tenuis, Walk. Cat. Het. i. p. 151. 22[3].

Pangæus tenuis, Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 390.
Æthus insularis, Dall. nec Hope, Cat. Hem. i. p. 120. 24[4]; Walk. Cat. Het. i. p. 152. 24[5].

Hab. NORTH AMERICA, Arizona[2].—MEXICO[1] (*Mus. Berol.*), Orizaba[3]; GUATEMALA, Capetillo, Zapote, Aceituno (*Champion*); NICARAGUA, Chontales (*Janson*).—COLOMBIA; VENEZUELA[4]; TRINIDAD[5]; BRAZIL.

This wide-ranging species seems mostly to vary in the depth and distinctness of the transverse impression on the pronotum. Dallas identified the South-American specimens in the British Museum with doubt as the *Cydnus insularis*, Hope. Having satis fied myself that they belonged to the above species, I forwarded a specimen to Oxford for comparison with the type of *insularis*, which Prof. Westwood writes me is a much smaller species, besides differing in many other respects.

3. **Pangæus bilineatus.**

Cydnus bilineatus, Say, Journ. Ac. Phil. iv. p. 315. 1; Compl. Writ. ii. p. 242. 1.
Æthus bilineatus, Dall. List Hem. i. p. 119. 20.
Cydnus femoralis, H.-S. Wanz. Ins. v. p. 98, fig. 548.
Æthus robertsonii, Fitch, sec. typ. et Signoret.
Pangæus bilineatus, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 275, iii. p. 383; Proc. Bost. Soc. Nat. Hist. xix. p. 371.

Hab. NORTH AMERICA, Eastern and Southern States as far west as middle of Texas (*Uhler*).—MEXICO, Matamoras (*Uhler*).

This species is included in the fauna on the authority of Prof. Uhler, who writes:—"One specimen from Matamoras, Mexico, agrees with the form as seen in the Atlantic region." The same author remarks:—"It is of importance to record that this species varies very much in some of its structural features. In a few specimens, which were normal in other respects, the margin of the clypeus was scalloped each side of the middle, and emarginated in front of the tylus. The second and third joints of the antennæ are sometimes equal; at others, either may be longer than the other. The ostiolar canal and the plate to which it is attached vary in length and width, and are often ragged on the posterior margin. Two specimens have been examined by me which had the ostiolar piece of one side normal, and on the opposite side triangular and jagged. Usually there are but three pits and bristles on the costal margin; but occasionally there are four, and in one specimen I noticed five."

Of this species Mr. Townend Glover writes (Ill. Ins. Or. Hem. p. 21):—"The fossorial legs fit it especially for digging; and it is commonly found beneath sticks and stones on the ground in Maryland. (*P. R. U.*)"

4. **Pangæus fortis.** (Tab. III. fig. 8.)

Æthus fortis, Walk. Cat. Het. i. p. 151. 21[1].
Pangæus? fortis, Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 389.

Hab. MEXICO, Oaxaca[1], San Luis Potosi (*Dr. Palmer*).

The specimen figured is from Mexico; it appears to be a well-marked form and constant in character. Besides the type in the British Museum, I have seen some six other specimens in collections, all received from Mexico.

5. **Pangæus discrepans.** (Tab. II. fig. 19.)

Pangæus discrepans, Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 386[1].

Hab. North America, near Fort Cobb, Indian Territory; San Diego, California.—Mexico [1], Alvarez Mountains (*Dr. Palmer*); Nicaragua, Chontales (*Janson*).

The specimen figured seems to agree well with Prof. Uhler's description, and is from Alvarez Mountains, Mexico. It is most closely allied to *P.* (*Æthus*) *curvipes*, Dall., in structure, but lacks the transverse row of punctures near the anterior margin of pronotum.

6. **Pangæus impuncticollis** (Sign. in litt.), n. sp. (Tab. III. fig. 7.)

Above black, shining. Head broad; central lobe almost reaching anterior margin of head, which is reflexed; coarsely wrinkled near lateral borders. Pronotum smooth, shining, impunctate. Scutellum with a catenulate row of coarse punctures at base, which also extend less regularly and rather more coarsely along two thirds the length of each lateral margin; a few coarse and scattered punctures on disk. Corium with a claval catenulate line of coarse punctures, and embolium also coarsely punctured; disk with a few fine and obscure punctures. Membrane fulvous at base, pitchy towards apex. Body beneath concolorous; rostrum and anterior legs dark castaneous. Antennæ castaneous; third joint faintly luteous at tip, remainder wanting.

Long. $9\frac{1}{2}$ millim., lat. $5\frac{1}{2}$ millim.

Hab. Mexico; Panama (*coll. Sign.*)

The lateral pronotal borders are sparingly fringed with long hairs. This species is allied to *P. discrepans*, Uhler, but differs in the impunctate pronotum and different punctuation of the corium.

7. **Pangæus rufifrons.**

Cydnus rufifrons, H.-S. Wanz. Ins. v. p. 97. fig. 547[1]; Stål, En. Hem. pt. 5, p. 26. 30.
Pangæus rufifrons, Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 384. 2[2].

Hab. North America, Georgia [1], South Carolina [2].—Mexico (*Mus. Berol.*).

One specimen received from the Berlin Museum agrees with the typical figure and description, but varies in the colour being castaneous, thus being concolorous with the legs. The eyes are also pale luteous.

ECTINOPUS.

Ectinopus, Dallas, List Hem. i. pp. 110, 121 (1851).

This genus at present contains but one species, which has hitherto been found in the Central-American and Amazonian subregions of the Neotropical Region.

It is distinguished by the extreme length of the posterior tibiæ, which are half the

length of the body; they are also more slender, with their spines weaker than in the genus *Cyrtomenus*. The corium is also shorter than the membrane.

1. **Ectinopus holomelas.**

Cydnus holomelas, Burm. Handb. ii. p. 375. 7[1].
Ectinopus holomelas, Dall. List Hem. p. 122. 1, pl. 2. fig. 5[2]; Stål, En. Hem. pt. 5, p. 20[3].
Æthus fusiformis, Walk. Cat. Het. i. p. 150. 20[4].
Pangæus? *fusiformis*, Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 389.

Hab. MEXICO[3], Orizaba[4].—COLOMBIA[2 3]; N. BRAZIL[3], Para[1].

An examination of Walker's type in the British Museum has shown that his *Æthus fusiformis* is a small and somewhat dull-coloured specimen of the genus *Ectinopus*, and that it cannot be separated from this species.

MICROPORUS.

Microporus, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 275 (1875), iii. pp. 366, 373 (1877).

This genus at present contains but three species—one Nearctic, and the other two found in the Central-American subregion. The generic characters as enunciated by Prof. Uhler are:—"Scutellum broadly rounded; head with comb-teeth; body deep and convex; ostiolar canal short, at tip enlarged into a circular auricle; surface hairy exteriorly."

1. **Microporus testudinatus.** (Tab. II. fig. 24.)

Microporus testudinatus, Uhler, Bull. U.S. Geol. & Geog. Surv. vol. ii. p. 276[1], vol. iii. p. 374[2].

Hab. CALIFORNIA[1 2].—MEXICO[2]; GUATEMALA, Capetillo (*Champion*).

The specimen figured is from Guatemala, and does not appear to differ from the Mexican or more northern representatives of the species.

2. **Microporus mexicanus,** n. sp. (Tab. IV. fig. 8.)

Piceous, shining. Head with the anterior portion obscurely channelled and wrinkled. Antennæ with the three basal joints ochreous, the two apical ones luteous; second joint much the shortest; third, fourth, and fifth subequal. Pronotum with a somewhat obscure transverse impression, behind which it is distinctly and somewhat densely punctate; the anterior portion of the pronotum has the lateral borders broadly and coarsely punctate, the anterior margin narrowly and more obscurely punctate, and the disk impunctate. Scutellum obscurely wrinkled, somewhat thickly punctate, with the base narrowly impunctate; apex depressed and angularly rounded. Corium somewhat densely punctate, membrane pale whitish. Body beneath concolorous. Abdomen with the disk smooth; sides very finely and obscurely punctate. Fore and intermediate tarsi luteous; hind tarsi luteous, with the apical joint piceous.
Long. 5 millim., lat. basi pronot. 3 millim.

Hab. MEXICO (*Mus. Berol.*).

Allied to *M. obliquus*, Uhler, but differs from the description of that species in the following particulars:—It is much larger; the scutellum is not "polished, remotely

punctate," as in Uhler's species, but obscurely wrinkled and thickly punctate. The punctured lateral borders of the pronotum also differ from the description of *M. obliquus*.

LOBONOTUS.

Lobonotus, Uhler, Bull. U.S. Geol. & Geog. Surv. vol. iii. pp. 367 & 395 (1877).

As Prof. Uhler remarks, this is the most singular and aberrant of all the forms of the North-American Cydninæ. The elongated and produced head renders this genus very distinct. One species only is at present known.

1. **Lobonotus anthracinus.** (Tab. IV. fig. 7.)

Lobonotus anthracinus, Uhler, Bull. U.S. Geol. & Geog. Surv. vol. iii. p. 395[1].

Hab. Texas.—Mexico[1] (*Mus. Berol.*).

Uhler remarks that only two specimens of this species have as yet been secured. A third from Mexico is in the Berlin Museum, and is the specimen figured.

CANTHOPHORUS.

Canthophorus, subg. *Canthophorus*, Mulsant et Rey, Pun., Pent. p. 54 (1866); Stål, En. Hem. pt. 5, p. 22 (1876).

Sehirus, Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 396 (1877); Dall. (part.) List Hem. p. 127 (1851).

This genus is easily separable from all those previously enumerated by the less flattened and less spinous condition of the fore tibiæ.

1. **Canthophorus cinctus.**

Pentatoma cinctus, Palisot de Beauv. Ins. p. 114, Hem. pl. 8. f. 7.

Cydnus ligatus, Say, New Harm. Ind., Dec. 1831; Compl. Writ. i. p. 322.

Sehirus albonotatus, Dall. List Hem. i. p. 127.

Sehirus cinctus, Stål, Hem. Afr. i. p. 29 (note); Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 281, iii. p. 397; Proc. Boston Soc. Nat. Hist. xix. p. 372[1].

Cantophorus cinctus, Stål, En. Hem. pt. 5, p. 22.

Hab. North America, "almost whole country east of the great basin"[1]; Canada[1].—Mexico[1], Oaxaca (*Mus. Berol.*).

According to Prof. Uhler the females usually have a sublunate white spot near the postero-exterior corner of the corium. Mr. Say appears not to have known the female of this species; for he makes the absence of the white spot a specific difference. "Specimens occur with no spots on the corium, with the spots reduced to mere points, or with a spot only on one wing-cover." The specimens examined from Mexico are without the spot on corium.

THYREOCORIS.

Thyreocoris (p.), Schrank, Faun. Boic. ii. p. 46 (1801); Hahn, Wanz. ii. p. 47 (1834); Stål, En. Hem. v. p. 22 (1876).

Odontoscelis, Germ. Zeitschr. i. 1, p. 36 (1839).
Corimelæna, White, Mag. Nat. Hist. iii. (1839); Dall. List Hem. i. p. 54 (1851); Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 365 (1877).
Coreomelas, A. & S. Hem. p. 67 (1843).
Galgupha, A. & S. Hem. p. 68 (1843).

With this genus, which has been placed by some writers (*antè*, p. 1) in other subfamilies, we meet with a different section of the Cydninæ. The body is more or less ovate, and the scutellum large, not covering the outer margin of the corium, but in many cases almost or quite covering the membrane. Tibiæ more or less spinous.

1. **Thyreocoris cærulescens.**

Thyreocoris cærulescens, Stål, Stett. ent. Zeit. xxiii. p. 94. 42[1].
Corimelæna cærulescens, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 270[2].
Corimelæna cyanea, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 270[3].
Corimelæna cyaneonigra, Walk. Cat. Het. i. p. 78[4]; ib. iii. p. 522.

Hab. North America, Arizona[2 3], California[2 3], Kansas[2], Colorado[2].—Mexico[1 2 4]; Guatemala, Capetillo (*Champion*).

Dr. Signoret, who has examined specimens, informs me that the *C. cyanea*, Uhler, =*T. cærulescens*, Stål.

2. **Thyreocoris nitiduloides.**

Cimex nitiduloides, Wolff, Ic. iii. p. 98. 92, fig. 92[1].
Odontoscelis nitiduloides, Germ. Zeitschr. i. p. 37. 1[2]; H.-S. Wanz. v. pp. 12 et 33, fig. 471.
Corimelæna nitiduloides, Dall. List Hem. i. p. 56. 2[3]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 269[4], iii. p. 365[5]; Proc. Bost. Soc. Nat. Hist. xix. p. 366.
Thyreocoris histeroides, Say, Heteropt.

Hab. North America, Pennsylvania[1 2], Lake Erie, Vermont[3], Colorado[4 5].—Mexico, Alvarez Mountains (*Dr. Palmer*); Guatemala, Dueñas (*Champion*), Calderas (*Champion*).

Prof. Uhler states that this species was obtained above the "timber-line" in the mountains of Colorado by Lieut. W. L. Carpenter, and from that elevation differed in no important manner from the specimens common to Kansas, Texas, Missouri, and the Atlantic region. It was found in the month of August near Colorado springs, concealed among the roots of Yuccas and other plants. Prof. Uhler has had the opportunity of examining a specimen of *T. histeroides*, Say, from the collection of Dr. Harris, determined by Say himself, and pronounces it to be conspecific with *T. nitiduloides.*

3. **Thyreocoris rastratus.** (Tab. III. fig. 5.)

Corimelæna rastrata, Stål, Rio Hem. i. p. 8. 2[1].
Thyreocoris rastratus, Stål, Stett. ent. Zeit. xxiii. p. 94. 41?[2]; En. Hem. v. p. 23. 4[3].

Hab. Mexico[2]; British Honduras, Rio Hondo (*Blancaneaux*); Guatemala, Tamahu (*Champion*).—Colombia[3], Brazil[1 3].

Stål recorded this species doubtfully as from Mexico; he writes—"Exemplum femineum a Signoret missum ab exemplo typico masculino vix differt nisi statura majore, punctura fortiore, in thorace paullo minus densa." Specimens from British Honduras, one of which is figured, agree so well with Stål's description, that I have not hesitated to identify them as *T. rastratus*, the type of which was from Rio Janeiro.

4. **Thyreocoris lateralis.**

Tetyra lateralis, Fab. Syst. Rhynch. p. 142. 68[1]; Wolff, Ic. v. p. 175. 169. fig. 169.
Odontoscelis lateralis, Germ. Zeitschr. i. p. 39. 5.
Thyreocoris lateralis, Stål, En. Hem. v. p. 23. 8[2].
Corimelæna lateralis, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 271[3].

Hab. North America[2], Carolina[1], Michigan, New York, Massachusetts, Rhode Island, Pennsylvania[3].—Mexico (*Mus. Berol.*).

According to Prof. Uhler, Maryland specimens sometimes occur which are destitute of the lateral pale margin, and near Baltimore may be found all the varieties between the extremes of colour and punctuation. A specimen from Oaxaca in the Berlin Museum without the pale margin seems clearly referable to this species, agreeing with the variety described by Prof. Uhler.

5. **Thyreocoris pulicarius.**

Odontoscelis pulicarius, Germ. Zeitschr. i. p. 39. 6[1].
Corimelæna pulicaria, Dall. List Hem. i. p. 59. 10[2]; Uhler, Bull. U.S. Geol. & Geog.Surv. ii. p. 271[3].

Hab. North America[2 3], Pensylvania[1].—Mexico (*Mus. Berol.*).—Martinique[1].

Prof. Uhler states that this species is distributed over the whole length of Atlantic North America from Quebec to Florida, and westward to Louisiana and Texas. I include this species in the fauna from the examination of one specimen forwarded from the Berlin Museum, which I can only identify as the above.

6. **Thyreocoris championi,** n. sp. (Tab. II. fig. 25.)

Greenish black, shining. Corium, as seen at marginal borders, luteous. Head thickly and coarsely punctured, with the exception of a small impunctate space at base; pronotum and scutellum finely, sparsely, and obscurely punctured. Scutellum with a somewhat irregular and deep fovea on each side at base. Body beneath and femora greenish black, shining; tibiæ, tarsi, posterior margin of abdomen, and antennæ pale castaneous. Rostrum reaching posterior coxæ, pitchy brown.
Long. 2 millim.

Hab. British Honduras, Rio Hondo (*Blancaneaux*); Guatemala, Dueñas (*Champion*).

Allied to *T. marginella*, Dall

7. **Thyreocoris guttiger.** (Tab. II. fig. 16.)

Thyreocoris guttiger, Stål, Stett. ent. Zeit. xxiii. p. 94. 43[1]; En. Hem. v. p. 24. 15.

Hab. Mexico[1]; Guatemala, Capetillo (*Champion*); British Honduras, Rio Hondo (*Blancaneaux*).

8. **Thyreocoris quadrisignatus.** (Tab. II. fig. 17.)

Thyreocoris quadrisignatus, Stål, Stett. ent. Zeit. xxiii. p. 94. 44[1]; En. Hem. v. p. 24. 16.

Hab. Mexico[1]; British Honduras, Rio Hondo (*Blancaneaux*).

9. **Thyreocoris incertus.** (Tab. III. fig. 4.)

Corimelæna incerta, Uhler, Proc. Ent. Soc. Phil. ii. p. 156. 3[1].

Hab. Nicaragua.—Cuba[1].

The specimen figured is from Nicaragua, for which I am indebted to the kindness of Prof. Uhler.

CYRTASPIS.

Cyrtaspis, Stål, Rio H. i. p. 9 (1860); En. Hem. v. p. 25 (1876).
Megaris, Stål, Rio H. ii. p. 57 (1862).

The orbicular and hemispherical body, with the small head carried almost in the same perpendicular plane with the anteriorly sharply truncated pronotum, are alone characters sufficient to distinguish this genus from any other of the Cydninæ here enumerated.

1. **Cyrtaspis atratula.** (Tab. IV. fig. 13.)

Megaris atratula, Stål, Stett. ent. Zeit. xxiii. p. 84. 16[1].
Cyrtaspis atratula, Stål, En. Hem. v. p. 25.

Hab. Mexico (*Mus. Berol.*), Tabasco[1].

Subfam. *SCUTELLERINÆ.*

The Scutellerinæ of Central America, roughly calculated, are in genera about two fifths and in species rather higher, in comparison with the number of genera and species respectively of the whole Nearctic and Neotropical Regions. With few exceptions these two regions approximate to the Palæarctic in the paucity of the number of species found in them, the smallness of their size, and the obscurity of their colour as compared with those of the Ethiopian, Oriental, and Australian Regions. If to these last three we add the Palæarctic and compare the number of genera and species with those of the Nearctic and Neotropical Regions, the last are found to contain only about two thirds the number of the former in genera, and less than half in species.

The great amount of colour-variation, and even of size, to be observed in the species of this subfamily has added much to the difficulty of proper specific identification, and therefore necessarily increased the synonymic nomenclature. But the more interesting and much more difficult problem is to find the biological explanation of so many representatives of different genera all varying in one peculiar and uniform direction. Thus in the genera *Homœmus*, *Sphyrocoris*, and *Symphylus* there are species always

tending to a variation which is lighter in coloration, and has the addition of two large rounded subapical spots to the scutellum; *H. proteus*, *S. punctellus*, *S. elongatus*, *S. deplanatus*, and *S. pœcilus* all have varieties in which this peculiarity is uniform.

TETYRA.

Tetyra, Fabricius, Syst. Rhyng. p. 128 (1803); Stål, Öfv. Vet. Akad. Förh. 1867, p. 492; En. Hem. i. p. 4 (1870).
Macraulax, Dall. List Hem. i. p. 36 (1851).

This genus is well represented in Central America. It is found as far north as Texas, and extends southwards to Colombia, Brazil, and the Argentine Republic. Of the five known species, only two remain unrecorded from this region, *i. e. T. pinguis*, Germ., which has only been as yet announced as received from Jamaica, Cayenne, and Brazil, and *T. pœcila*, Berg, lately described from the Argentine Republic. Mr. Dallas founded the genus *Macraulax* for *Pachycoris bipunctatus*, H.-S., two specimens of which he recorded from Australia. The late Prof. Stål, however, described Herrich-Schäffer's species as being a Texan and Mexican Hemipteron, specimens of which are contained in the Stockholm Museum; and he also considered (probably from an examination of the same) that the Texan form *Macraulax tristis*, Uhler, was a synonym of the same species.

The fundamental characters by which Stål has differentiated this genus from the following are—"Segmento sexto ventris utriusque sexus apice sensim rotundato-sinuato vel medio subrecto, marginibus imis lateralibus anticis thoracis haud reflexis." The third joint of the rostrum is much longer than the fourth.

1. Tetyra bipunctata.

Pachycoris bipunctatus, Herrich-Schäffer, Wanz. Ins. iv. p. 87, f. 420
Macraulax bipunctatus, Dall. List Hem. i. p. 36, tab. i. f. 4[1].
Macraulax tristis, Uhler, Proc. Ent. Soc. Philad. i. p. 21[2].
Tetyra bipunctata, Stål, En. Hem. i. p. 4[3].

Hab. North America, Baltimore[2], Texas[3].—Mexico[3].—Australia[1]??

This species is readily differentiated from the two following ones enumerated by the length of the rostrum, which extends to about the middle of the abdomen. The abdomen has also a distinct central furrow.

2. Tetyra arcuata.

Cimex arcuatus, Fab. Ent. Syst. iv. p. 83. 12[1].
Tetyra arcuata, Fab. Syst. Rhynch. p. 134. 26; Schjödte, in Kröyer's Nat. Tidsskr. iv. p. 292. 12; Stål, Hem. Fab. i. p. 13. 1[2]; En. Hem. i. p. 4[3].
Pachycoris arcuata, Germ. Zeitschr. i. p. 92. 21[4].

Hab. Mexico (*Mus. Stockholm*)[3].—Antilles[1 2 4],

Stål alone records this species from Mexico; it is apparently common to the Antillean fauna.

3. **Tetyra farcta.** (Tab. III. fig. 1.)

Pachycoris farctus, Germ. Zeitschr. i. p. 92. 20[1]; Walk. Cat. Het. Hem. i. p. 47.
Pachycoris guttipes, Walk. Cat. Het. Hem. i. p. 47[2].
Tetyra farcta, Stål, En. Hem. i. p. 5[3].

Hab. Mexico[1 3] (*Mus. Berol.*), Orizaba, Oaxaca[2].—Colombia[3].

This species, as stated by Stål, is distinguished from the two preceding by the structure of the odoriferous orifices, "breviter ovalibus marginibus levissime elevatis, haud auriculatis." The specimen figured is the type form described by Walker as *P. guttipes*, in the collection of the British Museum.

PACHYCORIS.

Pachycoris, Burmeister, Handb. ii. 1, p. 391 (1835); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 492.

This genus as now restricted is well represented in Central America; it is found in the West-Indian Islands, and extends southwards through Brazil and the Argentine Republic. Of the six species now associated as congeneric, two are here included. The remaining described forms are *P. fabricii*, Linn., *P. wilsonii*, Uhler (Cuba), *P. discrepans*, Uhler (N. Peru), and *P. obscuratus*, H.-S., described as from South America. Stål distinguishes this from the preceding genus in chief by "segmento sexto ventris feminarum apice medio late rotundato producto." The length of the head is greater than the breadth between the eyes.

1. **Pachycoris torridus.**

Cimex torridus, Scopoli, Ann. V. Hist.-Nat. p. 110. 109; Gmel. Syst. Nat. i. 4, p. 2134. 177.
Tetyra schousboei, Fab. Syst. Rhynch. p. 132. 18; Schjödte in Kröyer's Nat. Tidsskr. iv. p. 288. 8.
Pentatoma fabricii, Tigny, Hist. des Ins. ed. 2, iv. p. 290. f. 6.
Scutellera decorata, Perty, Del. An. p. 164, t. 33. f. 1.
Pachycoris fabricii, Burm. Handb. ii. 1, p. 392. 1; Hahn, Wanz. Ins. iii. p. 27. f. 249; Blanch. Hist. des Ins. p. 155. 3; Germ. Zeitschr. i. 1, p. 84. 5; A. et S. Hist. des Hém. p. 32. 2; Dall. List Hem. i. p. 31. 3, excl. syn. Linnæi et Fabricii; H.-S. Wanz. Ins. iv. p. 6. f. 349, excl. syn.
Pachycoris klugii, Germ. Zeitschr. i. 1, p. 85. 6; Dall. List Hem. i. p. 31. 2; H.-S. Wanz. Ins. iv. p. 5, f. 347 & 348; Burm. Handb. ii. 1, p. 392. 3[1].
Pachycoris linnæi, Hope, Cat. Hem. i. p. 12.
Pachycoris schousboei, Burm. Handb. ii. 1, p. 392. 2; Germ. Zeitschr. i. 1, p. 83. 4.
Pachycoris aquila, H.-S. Wanz. Ins. v. p. 7. f. 463.
Pachycoris stallii, Uhler, Proc. Ent. Soc. Phil. ii. p. 159.
Pœcilocoris æneiventris, Voll. Faune Ent. Ind. Neerl. i. p. 7, pl. 1. f. 3.
Pachycoris decoratus, Mayr, Reise der Freg. Novara, Hem. p. 25.
Pachycoris torridus, Stål, En. Hem. i. p. 5; Berg, Hem. Argent. p. 25.

This is one of those extremely variable species which frequently appear in the Scutellerinæ, and in its protean aspect even more than rivalling *Tectocoris lineola* of the Oriental and Australian regions. *P. torridus* is found in the Nearctic fauna, and probably extends throughout the whole length and breadth of the Neotropical Region. Vollenhoven described and figured as *Pœcilocoris æneiventris* a form which apparently is only a variety of this species; and though its habitat is given as "in India Orientali," he states that the type was a solitary specimen in the Royal Museum, "sans indication spéciale de patrie, mais provenant de l'Archipel Indien."

The following are the well-marked varietal forms which have been received from Central America.

BENEATH DARK SHINING GREEN.

Var. *a*. (Tab. I. fig. 1.)

Above black or obscure purplish. Pronotum marked with eight, scutellum with fourteen rounded spots, varying in colour from bright sanguineous to luteous. In some specimens the spots are subequal in size; in others they are very unequal, which is instanced in the specimen figured, received from Caché, Costa Rica. In other specimens of this form the discal transverse series of four spots are enlarged and slightly fused.

Var. *b*.

Resembles var. *a*, as figured above, but pronotum with only six spots.

Var. *c*.

Pronotum as in var. *a*. Scutellum with macular markings on apical half very irregular. The whole fourteen spots are never present, sometimes only one is absent, generally two or three.

Var. *d*. (Tab. I. figg. 2 & 3.)

Pronotal spots as in var. *a*. Scutellum with the apical five spots much enlarged and irregularly fused. In one specimen which is figured from Mexico the central longitudinal spots on the pronotum are also fused together.

Var. *e*. (Tab. I. fig. 4.)

Pronotum with five, six, eight, or in one specimen no spots. Scutellum with the number of spots irregular, but the two marginal ones always very large.

Pachycoris torridus, var. *e*, Stål, En. Hem. i. p. 6.

This appears to be the form described by Burm.[1] as *P. klugii*.

Var. *f*. (Tab. I. fig. 5.)

Above dull rufous. Pronotum with two large triangular black markings at base, two small ones on disk near lateral margins, and with two larger obscure spots of the same colour on anterior margin.

Var. *g*.

Resembling var. *f*, but pronotum and scutellum spotless, concolorous.

Var. *h*. (Tab. I. fig. 6.)

Colour above as in two preceding vars. Pronotum with four irregular transverse black fasciæ; two basal, and two apical and submarginal. Scutellum with two transverse waved fasciæ near base, two small spots placed close together on disk, and two rather larger ones placed severally on each lateral margin a little beyond middle; these spots and fasciæ are black.

This var. seems to resemble var. *h*, Stål, En. Hem. i. p. 6.

BENEATH LUTEOUS WITH GREEN REFLEXIONS.

Var. *i*. (Tab. I. fig. 7.)

Pronotum and scutellum greenish, irregularly marked with reddish spots, which are sometimes confluent. Head reddish, with two central greenish lines.

This is an extreme varietal form, and seems to come close to the var. *i* of Stål, En. Hem. i. p. 6 (1870).

This species is distinguished from *P. fabricii*, Linn., and the following species by the shape of the head (which has the lateral margins considerably sinuated), and by the distinct punctuation of the surface of the same.

Hab. CALIFORNIA (*Uhler*).—MEXICO (var. *d*), Oaxaca (vars. *a*, *c*, *d*); NICARAGUA, Chontales (vars. *a*, *i*); COSTA RICA (*v. Patten*) (vars. *a*, *b*, *d*, *e*, *f*, *g*, *h*), Caché (*Rogers*) (var. *a*), Irazu (*Rogers*) (var. *e*); GUATEMALA, San Juan (var. *e*), San Gerónimo (*Champion*) (var. *a*).—COLOMBIA (var. *c*); BRAZIL (var. *a*).

2. **Pachycoris dissociatus.**

Pachycoris dissociatus, Uhler, Proc. Ent. Soc. Philad. i. p. 21[1].

Hab. MEXICO, Nuevo Leon [1]; COSTA RICA (*Coll. Dist.*).

A specimen from Costa Rica seems to agree with Prof. Uhler's description, and would appear to be only an extreme melanic variety of *P. torridus*. Our own specimen is separated from that species by the much more deeply sinuated lateral margins of the head. I have unfortunately been only able to examine one specimen, the antennæ of which are absent.

ASCANIUS.

Ascanius, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 492.

This genus is best recognized by the more or less erosion of the abdominal margins, and the hexagonal pronotum, of which the anterior is longer than the antero-lateral margins. Two species are recorded, both from the Amazonian subregion, one of which we now include in this fauna.

1. **Ascanius atomarius.**

Pachycoris atomarius, Germ. Zeitschr. i. p. 96. 30; H.-S. Wanz. Ins. v. p. 10. f. 468[1].

Hab. MEXICO (*Mus. Berol.*).—BRAZIL [1].

Two specimens of this species from Mexico are in the collection of the Berlin Museum.

ORSILOCHUS.

Orsilochus, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 493.

Of the five species at present known as constituting the genus, three are found in Central America, one, *O guttatus*, H.-S., is a Nearctic form, and the other, *O. leucopterus*, Germ., has only been recorded from Brazil.

This genus has a considerable resemblance to *Pachycoris*; the second and third joints of the antennæ, however, are subequal in length, and the head is also more triangular, robust, and convex, which serve as superficial characters by which to separate the two genera.

1. **Orsilochus variabilis.**

Pachycoris variabilis, H.-S. Wanz. Ins. iv. pp. 9 & 10. figs. 353, 354[1]; Germ. Zeitschr. i. p. 88. 11[2]; Dall. List Hem. i. p. 32. 6[3].

Orsilochus variabilis, Stål, En. Hem. i. p. 9[4].

Var. *a*. **punctatissimus.** (Tab. I. fig. 9.)

Pachycoris punctatissimus, Dall. List Hem. i. p. 32. 7, excl. syn.[5]

Var. *b*. **marginellus.**

Pachycoris marginellus, Dall. List Hem. i. p. 32. 8[6]; Stål, En. Hem. i. p. 7[7].

Var. *c*. **complicatus.** (Tab. I. fig. 8.)

Pachycoris complicatus, Uhler, Proc. Ent. Soc. Philad. ii. p. 361[8].

Hab. Mexico [1 2 3 4 5 8] (*Mus. Berol.*); Guatemala, San Gerónimo, Vera Paz (*Champion*); Costa Rica, Caché (*Rogers*).—Colombia [5].

This species is subject to great variation; the forms figured are vars. *punctatissimus* and *complicatus*, the first from Mexico, the second from Costa Rica. The var. *marginellus*, Dall., differs from *punctatissimus* in having a central pale longitudinal line, and a transverse black patch on each side near anterior margin of pronotum. The habitat of the type was unknown [6]; but the probability necessarily is that it is found in the same region with the other varieties. The type is slightly larger than usual forms of *P. punctatissimus*; but only one specimen exists in the British Museum, though Walker (Cat. Het. i. p. 47) records three other specimens of the form from Mexico. An examination, however, shows that Walker, under the names of *P. boscii* (where he inserts *punctatissimus* as a synonym) and *P. marginellus*, has fallen into terrible confusion, and mixed not only *P. punctatissimus* and *P. marginellus* in each case together, but also with them species of other genera. His habitats are therefore useless; and this explanation is necessary for not recording them. The var. *complicatus* is a larger and more robust form, the size as stated by Prof. Uhler being length 11 millims., hum. breadth $6\frac{2}{3}$ millims.; the apex of the scutellum appears rather more abruptly deflexed; and the punctuation of the pronotum in some specimens is slightly different. But intermediate forms between all these varieties exist, and a fine series (all from Mexico) received from the Berlin Museum afforded an excellent opportunity of certifying the same. The colour beneath also varies from dark greenish black to slightly mottled luteous.

2. **Orsilochus sticticus.** (Tab. II. fig. 1.)

Pachycoris sticticus, Dall. List Hem. i. p. 34. 11 [1].

Hab. British Honduras [1], Rio Hondo (*Blancaneaux*).

The specimen figured is from the Rio Hondo; it is darker in colour than the type in the British Museum, the bands of dark punctures being more developed. The species appears to be peculiar to Honduras.

3. **Orsilochus scurrilis.** (Tab. II. fig. 23.)

Pachycoris scurrilis, Stål, Öfv. Vet.-Ak. Förh. 1855, p. 181, et 1856, p. 53 [1].

Hab. Mexico [1]; Guatemala, San Gerónimo, Vera Paz, Tocoy (*Champion*).

The specimen figured is in the State Museum at Stockholm; and I am indebted to Prof. Lindström and Dr. Jacob Spängberg for affording me the opportunity of figuring this and other Central-American species described by the late Prof. Stål. The specimens received from Guatemala vary principally in the width of the subdiscal transverse fasciæ and the size of the apical spots.

DYSTUS.

Dystus, Stål, Stett. ent. Zeit. xxiii. p. 82 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 494.

This genus was founded by Stal for the reception of the following species, which it at present alone contains:—

1. **Dystus puberulus.** (Tab. II. fig. 2.)

Dystus puberulus, Stål, Stett. ent. Zeit. xxiii. p. 83. 12 [1].

Hab. Mexico [1].

The type is figured, the same having been most obligingly lent for that purpose by Dr. Signoret, in whose collection it remains.

TIRIDATES.

Tiridates, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 494.

This genus contains two species, both Mexican, which we have hitherto been unable to procure, and therefore have not examined the generic characters. It is allied to *Agonosoma*, according to Stål, by the following common characters:—"Segmento ventrali sexto ventris retrorsum valde producto, apice rotundato vel nonnihil truncato, genitalia tegente; articulo secundo rostri articulis tertio et quarto ad unum longitudine æquali vel paullo longiore."

1. Tiridates mexicanus.

Pachycoris mexicanus, H.-S. Wanz. Ins. iv. p. 3. f. 343; Germ. Zeitschr. i. 1, p. 89. 12.
Pachycoris flavicinctus, H.-S. Wanz. Ins. iv. p. 8. f. 351; Germ. Zeitschr. i. 1, p. 163. 43.
Tiridates mexicanus, Stål, En. Hem. i. p. 13.

Hab. MEXICO.

I have followed Stål in considering the two above forms as conspecific, but have been unable at present to examine specimens.

2. Tiridates rubro-cinctus.

Pachycoris rubro-cinctus, H.-S. Wanz. Ins. iv. p. 9. f. 352; Germ. Zeitschr. i. p. 103. 44.
Agonosoma rubro-cinctum, Stål, Stett. ent. Zeit. xxiii. p. 83. 13[1].

Hab. MEXICO [1].

Although very dissimilar above in general markings and coloration to *T. mexicanus*, I have had no opportunity of examining the structural characters of the two species, and therefore admit it here provisionally. Stål seems to have had doubts as to its specific character, as, although admitting it to that rank, he writes "abdomine pedibusque nigris a precedente divergens; an specifice distinctus?"

HOMÆMUS.

Homœmus, Dallas, List Hem. i. p. 36 (1851); Stal, Öfv. Vet.-Ak. Förh. 1867, p. 494.

This is generally a Nearctic genus. Several species have lately been described from that region; and more doubtless remain to be discovered. Three species have as yet been recorded from Central America; but one has also been received from Colombia, and two are common to the southern portion of the Nearctic fauna.

The principal character of this genus is the produced anterior margin of the sternum concealing the base of the antennæ.

1. Homœmus grammicus.

Tetyra grammicus, Wolff, Ic. cim. v. p. 172. f. 166, excl. syn.
Pachycoris parvulus, Germ. Zeitschr. i. p. 107. 53 [1]; H.-S. Wanz. Ins. v. p. 54. f. 501.
Homœmus parvulus, Dall. List Hem. i. p. 36. 2 [2]; Stål, En. Hem. i. p. 14 [3].

Hab. NORTH AMERICA, Carolina [1], East Florida [2]; TEXAS [3].—MEXICO [3].

Wolff, in describing and figuring the species as above, gave the locality as Africa ("*Hab.* in Africa, Mus. D. D. Panzer"), thus following Fabricius, with whose *Tetyra grammica* he confounded his own species. They are, however, not congeneric—Stål, who had possibly examined the type, placing the *T. grammica*, Wolff, in the genus *Homœmus*, whilst the *T. grammica*, Fab., belongs to the genus *Odontotarsus*. It is

therefore probable that Wolff, in confounding the two species, likewise copied the name of the habitat from Fabricius.

2. **Homæmus ænifrons.**

Scutellera ænifrons, Say in Long. Exp. ii. p. 299. 2; Compl. Writ. i. p. 199. 2.
Pachycoris exilis, H.-S. Wanz. Ins. iv. p. 5. f. 346; Germ. Zeitschr. i. p. 98. 35.
Homæmus exilis, Dall. List Hem. i. p. 36. 1, pl. 1. f. 5.
Homæmus ænifrons, Stål, En. Hem. i. p. 15; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 272, iii. p. 365; Proc. Bost. Soc. Nat. Hist. xix. p. 368.

Hab. North America.—Mexico (*Mus. Berol.*); Guatemala, Capetillo (*Champion*).

Specimens from Central America appear to be much smaller than more northern forms. Of these Uhler states that in general western mountain specimens are not so dull-coloured nor so broad as those which occur on the eastern side of the continent; and in Maryland the species seems to affect the colder parts of the State, where the vegetation is from a week to ten days later in developing than in the lowlands of the warm areas.

3. **Homæmus proteus.** (Tab. II. figg. 3 & 4.)

Homæmus proteus, Stål, Stett. ent. Zeit. xxiii. p. 82. 11[1].

Hab. Mexico [1].—Colombia (*Mus. Holm.*).

The following are the described varieties of this form:—

Var. *a.*

Obscure punctatus, supra unicolor, pallido conspersus.

Var. *b.*

Ut var. *a*, sed scutello utrimque ante medium macula mediocri ornato.

Var. *c.*

Thorace utrimque vittis vel fasciis duabus valde obliquis, fuscis, angustis; scutello basi interrupte infuscato, posterius maculis duabus subconnexis majusculis fuscis.

Var. *d.*

Ut var. *c*, sed pictura thoracis distinctiore, scutello utrimque vittis duabus fuscis obliquis ornato.

The forms figured are the type vars. *a* and *c*, in the collection of Dr. Signoret, who has in the most liberal and scientific spirit placed the whole of Stål's types in my hands for examination and illustration.

SPHYROCORIS.

Sphyrocoris, Mayr, Verh. zool.-bot. Ges. Wien. xiv. p. 904 (1864); Reise der Freg. Novara, Hem. p. 16 (1866).

The three species of this genus at present known are found in Central America, one

of which, *S. obliquus*, Germ., is common to the Antillean fauna. It is easily recognized by the shape of the odoriferous orifice, which towards the outer margin is abruptly bent in a rectangular manner.

1. **Sphyrocoris obliquus.**

Pachycoris obliquus, Germ. Zeitschr. i. p. 94. 24[1]; H.-S. Wanz. Ins. v. p. 54. f. 491; Dall. List Hem. p. 35[2].

Homœmus obliquus, Stål, Stett. ent. Zeit. xxiii. p. 81. 9[3].

Sphyrocoris obliquus, Mayr, Reise der Freg. Novara, Hem. p. 26, note; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 273[4].

Hab. North America, Arizona[4].—Mexico[3]; Guatemala, Capetillo (*Champion*).—Colombia[2]; Martinique[1].

2. **Sphyrocoris elongatus,** n. sp. (Tab. II. fig. 6.)

Above ochreous, somewhat closely punctured with brown and marked with irregular dark brown fasciæ. Head with two central lines, and lateral borders for two thirds from base pitchy brown. Pronotum with a central narrow elongated oval fascia of brown punctures, and two central dark brown fasciæ, which, commencing on anterior margin a little to the left and right of the base of central lobe of the head, are continued almost longitudinally halfway across towards base, when they are suddenly deflexed and terminate near the lateral angles of the scutellum; on either side of these are two oblique fasciæ of the same colour running parallel with the lateral borders. Scutellum with the following dark brown markings:—four central irregular spots at base, the inner two much the smallest; two oblique fasciæ on each side extending from base to about centre of outer margin; two large irregular transverse fasciæ situated a little beyond centre, almost meeting on disk, where they are widest, and narrowed to where they terminate near outer margin; behind these an elongated crescentic fascia near apex. A central pale longitudinal line extending through head to apex of scutellum.

Underside of body pale ochreous, with the lateral borders broadly covered with dark punctures, which are much darker and confluent on lateral borders of sternum and head. Disk of abdomen with a few scattered punctures. Legs setose, thickly and very coarsely punctured with pitchy brown. Rostrum just passing posterior coxæ, with the two apical joints pitchy. Antennæ with the second and third joints subequal. Basal joint luteous, second and third somewhat fuscous, remaining joints wanting.

Long. 8 millim.; lat. pronot. ang. 5 millim.

Hab. Mexico, Ocaña (*Coll. Dr. Signoret*).

Var. *a*.

Above pale ochreous, punctured with brown. Scutellum with the base (narrowly) and two large rounded contiguous subapical spots ferruginous.

Hab. Mexico (*Mus. Berol.*).

3. **Sphyrocoris punctellus.** (Tab. II. fig. 5.)

Homœmus punctellus, Stål, Stett. ent. Zeit. xxiii. p. 81. 10[1].

Hab. Mexico[1].

The following are the described varieties (Stål, En. Hem. i. p. 15):—

Var. *b*.

Pallidior, scutello apice minute sanguineo consperso.

Var. *c*.

Scutello apice macula pallida notato.

Var. *d*.

Nigricans; plaga laterali ante medium indeterminata maculaque apicali scutelli, coxis, trochanteribus, maculis marginalibus abdominis discoque ventris griseo-flavescentibus, hoc nigro consperso.

The specimen figured is the type from Mexico, in the collection of Dr. Signoret; a second specimen examined, from the State Museum, Stockholm, is much darker in colour and has a small oblong pale space at apex of scutellum, agreeing with var. *c*.

SYMPHYLUS.

Symphylus, Dallas, List Hem. i. p. 37 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 495.

This genus probably extends throughout the Neotropical Region; it is also common to the Antillean fauna. It comprises a number of variable forms which cluster round each of its species. As a rule, in separating the species of this difficult genus, size and shape are of the greatest value. The variation seems to run from simple punctuation to the formation of the punctures into curved and oblique fasciæ.

The small triangular and anteriorly pointed head, together with the shortness and curvature of the odoriferous orifice, sufficiently distinguish this from the preceding genus.

1. **Symphylus deplanatus.** (Tab. I. figg. 12, 13.)

Pachycoris deplanatus, H.-S. Wanz. Ins. iv. p. 3, fig. 344[1]; Germ. Zeitschr. i. p. 97. 32.
Symphylus knockii, Dall. List Hem. i. p. 38[2].
Symphylus deplanatus, Stål, En. Hem. i. p. 15[3].

Hab. British Honduras[2]; Guatemala, Zapote (*Champion*).—Jamaica[2]; Brazil[1 2 3].

The specimens figured are two varieties of this species from Guatemala. Fig. 13 resembles in general appearance *Symphylus pœcilus*, Dall., var., and *Homœmus proteus*, var., Stål.

2. **Symphylus plagiatus.** (Tab. II. fig. 7.)

Symphylus plagiatus, Walk. Cat. Het. i. p. 55. 11[1]; Stål, En. Hem. i. p. 16. 3[2].

Hab. Mexico, Oaxaca[1]; Guatemala, Zapote (*Champion*).—N. Brazil[2], Santarem[1].

The specimen figured is from Guatemala, and has the pronotal and scutellar markings more strongly developed than in the type.

3. **Symphylus modestus,** n. sp. (Tab. II. fig. 8.)

Above testaceous, thickly punctured with reddish brown, with an obscure pale central line extending through head, pronotum, and scutellum. Eyes somewhat pitchy; ocelli red; base of the head somewhat paler and impunctate. Antennæ with the basal joint pale luteous; second joint slightly longer than the third. Apical third of tho scutellum with the punctures much finer and more obscure. Body beneath pale

luteous, thickly punctured with reddish brown; disk of abdomen with two pale triangular fasciæ, inside which the punctures are arranged in small groups. Legs luteous, setose, strongly punctured with reddish brown.

Long. 7 millim.

Hab. GUATEMALA, Dueñas, Capetillo (*Champion*).

In a second specimen the punctures on the pronotum (at base) and scutellum (on lateral border) show signs of amalgamating into curved lines, as in varieties of other speeies of the genus. There is also a faint indication of a pale scutellar apical spot.

4. **Symphylus signoreti,** n. sp. (Tab. II. fig. 9.)

Ochreous yellow, marked with reddish-brown fasciæ. Head closely covered with reddish-brown punctures. Pronotum thickly punctured and marked with reddish brown, and with a central pale crescentic fascia, which commences near lateral angles of seutellum and extends to near anterior margin, where it is elongated in a rectangular manner anteriorly, and in a short narrow line posteriorly; this pale fascia is bordered on each side with reddish brown. Scutellum with a Maltese-cross-shaped fascia of brown punctures on disk, on each side of which the lateral borders are broadly reddish brown from base to medium, enclosing a small pale space on marginal border; behind these the apical third is punctured and irregularly marked with the same colour, bordered darker inwardly and containing a rounded pale space at apex. Underside ochreous; lateral borders broadly covered with dark punctures. Legs coarsely punctured with reddish brown. Rostrum with the tip pitchy. Antennæ wanting.

Long. 6 millim.

Hab. MEXICO (*coll. Dr. Signoret*).

Although in an imperfect condition (antennæ wanting), I have not hesitated to describe this species, in order to insert it in the Hemipterous fauna of the region. It is perhaps most closely allied to *S. obtusus*, Dall., from which it differs not only by its markings, but also by its larger size and its more elongated and linear form. The head is less suddenly deflexed; and the lateral margins of the pronotum are much straighter.

5. **Symphylus gibbosus,** n. sp. (Tab. III. fig. 2.)

Above ochreous unicolorous, punctured with brown, more finely and densely so on scutellum, which has at the base an obscure central semicircular space, the outer margin of which is somewhat paler in colour. Body beneath and legs paler than above; tibiæ with a few coarse brown punctures; antennæ wanting.

Long. 5 millim., lat. pronot. ang. 4 millim.

Hab. MEXICO.

The pronotum and scutellum are gibbous, the anterior half of the first and head are abruptly deflexed, and the apex of the latter abruptly truncated. The lateral margins of the pronotum are somewhat rounded and ampliated, with the lateral angles subprominent.

The species was kindly placed in my hands for identification by Dr. Signoret, in whose collection it remains.

6. **Symphylus luminosus.**

Pachycoris luminosus, Germ. Zeitschr. i. p. 95. 29[1]; H.-S. Wanz. Ins. v. p. 6, fig. 461.
Symphylus luminosus, Stål, En. Hem. i. p. 16.

Hab. MEXICO [1] (*Mus. Berol.*).

7. **Symphylus infamatus.**

Symphilus infamatus, Uhler, Proc. Ent. Soc. Philad. ii. p. 361[1].

Hab. MEXICO [1].

I have not seen this species; Prof. Uhler describes it as resembling *Diolcus irroratus*, Fab.

CAMIRUS.

Camirus, Stål, Rio Jan. Hem. ii. p. 57 (1862).
Zophoëssa, Dall. List. Hem. i. p. 43 (1851), nec Westwood (Lepid.).

This genus is found in the southern portion of the Nearctic, and probably extends throughout the Neotropical Region.

One of the chief characters in its diagnosis is the transverse furrow on the disk of the pronotum.

1. **Camirus conicus.**

Pachycoris conicus, Germ. Zeitschr. i. p. 106. 52[1]; H.-S. Wanz. Ins. v. p. 55. fig. 492; Dall. List Hem. i. p. 35. 15[2].
Camirus conicus, Stål, Rio Jan. Hem. ii. p. 57. 1[3].
Zophoëssa conica, Stål, Hem. i. p. 17. 2.

Hab. BRITISH HONDURAS, Rio Hondo (*Blancaneaux*); GUATEMALA, Zapote (*Champion*). —VENEZUELA [2]; COLOMBIA [2]; BRAZIL [1 3].

Walker (Cat. Het. i. p. 50) has recorded this species from Mexico. The determinations of that author, however, are not always satisfactory. With that exception the species seems hitherto to have been unknown in the Central-American fauna.

2. **Camirus mœstus.** (*Zophoessa mœsta*, Tab. II. fig. 11.)

Zophoessa mœsta, Stål, Stett. ent. Zeit. xxiii. p. 83. 14[1]; En. Hem. i. p. 17. 3.

Hab. MEXICO [1].

The figure is from the type in the collection of Dr. Signoret.

3. **Camirus socius.** (*Zophoessa socia*, Tab. II. fig. 10.)

Zophoëssa socia, Stål, Stett. ent. Zeit. xxiii. p. 84. 15[1]; En. Hem. i. p. 17. 4.

Hab. MEXICO [1].

The specimen figured is the type, in the collection of Dr. Signoret.

AUGOCORIS.

Augocoris, Burmeister, Handb. ii. 1, p. 396 (1835); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 494.

This genus is common to the Neotropical Region, having been recorded as far south as Buenos Ayres; it is also present in the Antillean fauna.

Stål describes the antennæ of *Augocoris* as "*quadriarticulatis*." They are, however, apparently three-jointed; and this at once separates the genus from all others of the Scutellerinæ.

1. **Augocoris ehrenbergii.** (Tab. I. figg. 10, 11.)

Augocoris ehrenbergii, Germ. Zeitsch. i. 1, p. 140. 2; Dall. List Hem. i. p. 10. 1.

Hab. Mexico (*Mus. Stockholm*), Oaxaca (*Mus. Dist.*); Guatemala, Zapote (*Champion*).

This species can be at once determined structurally by the length of the rostrum, which about reaches the posterior coxæ only. It is probable that the colour-differences in the two specimens figured are sexual.

2. **Augocoris sexpunctatus.**

Cimex 6-punctatus, Fabr. Spec. Ins. ii. p. 339. 7; Mant. Ins. ii. p. 281. 8; Gmel. Syst. Nat. i. 4, p. 2128. 144; Fabr. Ent. Syst. iv. p. 82. 11.

Cimex illustris, Fabr. Spec. Ins. ii. p. 340. 12; Mant. Ins. ii. p. 231. 14; Gmel. Syst. Nat. i. 4, p. 2129. 150; Fabr. Ent. Syst. iv. p. 84. 18.

Cimex cretaceus, Panz. Voets Beschr. Ins. iv. p. 110, tab. 47. fig. 8.

Tetyra 6-punctata, Fabr. Syst. Rhyng. p. 133. 22 [1].

Tetyra illustris, Fabr. Syst. Rhyng. p. 134. 28 [2].

Scutellera pallida, Pal. Beauv. Ins. p. 234, Hem. pl. 5 *b*. fig. 8 [3].

Augocoris beskii, Burm. Handb. ii. 1, p. 396. 2 [4]; Blanch. Hist. des Ins. p. 160. 2; Germ. Zeitschr. i. p. 140. 3 [5].

Augocoris unicolor, Burm. Handb. ii. 1, p. 396. 3 [6]; Germ. Zeitschr. i. p. 141. 4.

Augocoris pallidus, H.-S. Wanz. Ins. iii. p. 107, fig. 333; Germ. Zeitschr. i. p. 141. 5 [7]; Dall. List Hem. i. p. 11. 5.

Augocoris gomesi, H.-S. Wanz. Ins. iv. p. 92, fig. 431 [8], excl. syn.

Pachycoris illustris, Germ. Zeitschr. i. p. 89. 13.

Augocoris rugulosus, H.-S. Wanz. Ins. iv. p. 92. fig. 432 [9].

Augocoris cretaceus, Dall. List Hem. i. p. 11. 6 [10]; Stål, Stett. ent. Zeit. xxiii. p. 81 [11].

Scutellera (*Augocoris*) *cretacea*, Guér. in Sagra, Hist. de Cuba, Ins. p. 359.

Scutellera (*Augocoris*) *pallida*, Guér. in Sagra, Hist. de Cuba, Ins. p. 360.

Augocoris sexpunctatus, Mayr, Reise der Freg. Novara, Hem. p. 21 [12]; Stål, Hem. Fabr. i. p. 14. 1; En. Hem. i. p. 18 [13]; Berg, Hem. Argent. p. 29. 27 [14].

Hab. Mexico [11]; Costa Rica, Irazu (*Rogers*); Panama (*Coll. Dist.*).—Cuba [6 7 8 13]; Porto Rico [13 10]; South America [9], Brazil [5 12 13 14], Para [10], Rio Janeiro [4 12]. Cape of Good Hope [2] is an erroneous habitat given by Fabricius, and from him copied by Germar. "America meridionali" [1] is too vague for faunistic classification.

Distinguished in all its variable forms from the preceding species by the rostrum, which reaches the centre of the abdomen. Prof. Uhler (Bull. U.S. Geol. & Geog. Surv.), "List of Hemip. of the Region west of the Mississippi River, including those collected during the Hayden Explorations of 1873," figures (in an outline drawing only) *Augocoris sexpunctatus* (pl. 19. fig. 8), but does not include the name of the species in his enumeration. In the absence of any information, we may therefore conclude that it does not extend to the Nearctic Region.

3. Augocoris gomesii.

Augocoris gomesii, Burm. Handb. ii. 1, p. 396. 1[1]; Germ. Zeitschr. i. p. 139. 1, tab. 1. fig. 1; Blanch. Hist. des Ins. p. 159. 1, pl. 8. fig. 5; A. & S. Hist. des Hém. p. 37. 1, fig. 8[2]; Dall. List Hem. i. p. 11. 4[3]; Stål, Stett. ent. Zeit. xxiii. p. 81. 2[4], En. Hem. i. p. 19. 3[5].

Augocoris gigas, Hope, Cat. Hem. i. p. 16[6]; Germ. Zeitschr. i. p. 139; Dall. List Hem. i. p. 10. 2[7].

Hab. MEXICO [2 4 5 6 7].—VENEZUELA [3]; BRAZIL, Para [1 3], Bahia [1].

Stål has described two varieties of this species from Surinam. It can always be distinguished by the length of the rostrum, which about reaches the apex of the abdomen.

Subfam. *ASOPINÆ*.

This well-marked subfamily is well represented in the Neotropical Region; and if to this we add the Nearctic, to which very few genera are entirely confined, we have an area which possesses nearly half the known genera of the whole world; and of this portion nearly two thirds are also represented in Central America. But it is in the Neotropical Region that the Asopinæ reach their maximum in brilliancy of coloration; nor are they inferior in size or structure to those of the more eastern regions, thus in these respects offering a complete contrast to the preceding subfamily Scutellerinæ, but affording agreement with that group in the fact of correlation in coloration between great brilliancy and excessive variation.

STIRETRUS.

Stiretrus, Laporte, Ess. Hém. p. 75 (1832); Dall. List Hem. i. p. 76. 3; Stål, Öfv. Vet. Ak. Förh. 1867, p. 496.

Stiretrosoma, Spin. Ess. Hém. p. 356 (1837); Dall. List Hem. i. p. 76. 2.

This genus is distinguished by the long and broad scutellum, reaching nearly to the apex of the abdomen, which is armed with a spine at the base. The anterior tibiæ are dilated in all the species here enumerated. The species found in Central America number only rather more than one fourth of those comprised in the genus, which is mostly represented in the Colombian and Amazonian Subregions. One species is common to Central America and the South Nearctic Region.

A. *Pronotum more than twice as broad as long.*

1. **Stiretrus crucifer.** (Tab. III. fig. 9.)

Stiretrus crucifer, Stål, Stett. ent. Zeit. xxiii. p. 85. 21[1]; En. Hem. i. p. 23. 6.

Hab. Mexico[1].

This species appears to be peculiar to Mexico; it has not as yet been received in any of the collections made in more southern portions of Central America.

B. *Pronotum not more than twice as broad as long.*

2. **Stiretrus cæruleus.** (Tab. III. fig. 10.)

Stiretrus cæruleus, Dall. List Hem. i. p. 79. 4[1]; Stål, Stett. ent. Zeit. xxiii. p. 85. 17[2].
Stiretrus (*Oncogaster*) *cæruleus,* Stål, En. Hem. i. p. 24. 10.

Hab. Mexico[1 2]; Guatemala, Tocoy, Vera Paz (*Champion*).

Two specimens referred to above differ slightly from the description of Mr. Dallas: neither has the base of the head beneath yellow; and in the Mexican specimen the basal third of the ventral spine is concolorous with the body.

3. **Stiretrus ruficeps.** (Tab. III. fig. 12.)

Stiretrus ruficeps, Dall. List Hem. i. p. 79. 6[1]; Stål, Stett. ent. Zeit. xxiii. p. 85. 18[2]; En. Hem. i. p. 26. 25; Walk. Cat. Het. i. p. 116. 13.
Stiretrus lythrodes, Walk. (part. *b, c, d*) Cat. Het. i. p. 115. 5[3].

Hab. Mexico[2], Orizaba, Vera Cruz[3]; Honduras[1].

The specimen figured is from Mexico, and varies from the type in having only the apical halves of the fore tibiæ bluish black. Other specimens have the legs wholly reddish orange, thus bearing a superficial resemblance to *S. lythrodes*, Germ.

4. **Stiretrus flavipes.** (Tab. III. fig. 11.)

Stiretrus flavipes, Stål, Stett. ent. Zeit. xxiii. p. 85. 19[1].
Stiretrus (*Oncogaster*) *flavipes,* Stål, En. Hem. i. p. 24. 11.

Hab. Mexico[1] (*Hope coll. Oxford*); Guatemala, San Gerónimo, Vera Paz (*Champion*).

5. **Stiretrus nigritarsis.**

Stiretrus (*Oncogaster*) *nigritarsis,* Stål, En. Hem. i. p. 24. 12[1].

Hab. Mexico[1].

6. **Stiretrus anchorago.** (Tab. I. figg. 14 & 15.)

Cimex anchorago, Fab. Ent. Syst. p. 86. 25.
Tetyra anchorago, Fab. Syst. Rhyng. p. 137. 44.
Tetyra diana, Fab. Syst. Rhyng. p. 137. 45.
Tetyra fimbriata, Say, Amer. Ent. pl. 43. fig. 1; Compl. Writ. i. p. 93, pl. 43. fig. 1.
Asopus diana, Burm. Handb. ii. p. 381. 12[1].
Pentatoma pulchella, Hope, Cat. Hem. i. p. 42[2].
Pentatoma anchorago, Hope, Cat. Hem. i. p. 42[3].
Stiretrus dianæ, Germ. Zeitschr. i. p. 19. 19[4]; H.-S. Wanz. Ins. v. p. 3, fig. 454.
Asopus variegatus, H.-S. Wanz. Ins. iv. p. 90, fig. 427.
Stiretrus anchorago, Dall. List Hem. i. p. 80. 7[5]; Stål, En. Hem. i. p. 24. 13[6]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 281[7].
Stiretrus fimbriatus, Dall. List Hem. i. p. 81. 10; Uhler, Proc. Bost. Soc. Nat. Hist. xix. p. 369; Packard, Guide, p. 547, fig. 551 (5th ed.).
Stiretrus ornatus, Dall. List Hem. i. p. 80. 8[8].
Stiretrus (*Oncogaster*) *personatus*, Stål (part.), En. Hem. i. p. 25. 14.
Stiretrus atricapillus, Walk. (part.) Cat. Het. i. p. 115. 8, *g*[9].
Tetyra violacea, Say, Am. Ent. pl. 43. fig. 2.
Stiretrus personatus, Germ. Zeitschr. i. p. 16. 12[10]; Stål, En. Hem. i. p. 25. 14.
Stiretrus violaceus, Germ. Zeitschr. i. p. 12. 3; A. et S. Hist. des Hém. p. 76. 2, pl. 1. fig. 1; Dall. List Hem. i. p. 79. 3; Stål, En. Hem. i. p. 25. 15.

Hab. North America, Connecticut[6], Havannah[1], Carolina[4], Georgia[2 3 5], Texas[6 7], New Mexico[7].—Mexico[8 10] (*coll. Sign.*, *Mus. Berol.*), Vera Cruz[9]; Brit. Honduras (*Blancaneaux*); Guatemala, Capetillo, San Gerónimo, Vera Paz (*Champion*); Costa Rica (*Van Patten*); Panama (*coll. Dist.*).

Of this variable and wide-ranging species Prof. Uhler writes:—"Almost all the varieties, from an almost uniform yellow *fimbriatus* through the red and blue *diana* to the uniform violet *violacea*, have passed through my hands." The Central-American specimens which I have had the opportunity of examining vary from the form *pulchella* (ground-colour greenish black or reddish purple) to the var. *violaceus*. The form figured, Tab. I. fig. 14, is from Costa Rica, and has the fore femora banded as in some of the more typical species, one of which, with the fore femora unicolorous, is figured on the same Plate (fig. 15), from Guatemala. The specimen confounded by Walker with *S. atricapillus*, Hope, is a variety which is reddish and unicolorous, with the legs bluish black. *S. ornatus*, Dall., is described as having the "thorax more than twice as broad as long," which would render it distinct, and bring it into the first section of the genus. I have, however, with Mr. Waterhouse, carefully measured the type and only representative in the British Museum, and find that the pronotum does not exceed in breadth more than twice the length. I have included the *S. personatus*, Germ., as a variety on the authority of Prof. Uhler, who states that the same form occurs in Pennsylvania. "In Maryland it frequents *Rhus glabra*, and sucks the blood of the

larvæ of a species of *Galeruca* which feeds on that plant" (*Uhler*). "It preys upon the larva of the Colorado potato-beetle (*Doryphora decemlineata*). Seven or eight individuals of this species were found in the web nest of a social caterpillar, and also were seen destroying the larva of *Papilo asterius* by Mr. Walsh" (*Townend Glover*, Ill. Ins. Or. Hem. p. 68, 1876).

OPLOMUS.

Oplomus, Spinola, Ess. Hém. p. 355 (1837); Dall. List Hem. i. p. 76. 5 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 496.

Catostyrax, A. & S. Hist. des Hém. p. 82 (1843).

This genus is at once separated from the preceding by the shape of the scutellum, which is much more angulated and narrowed beyond the middle. The anterior femora are armed with a spine near apex; the lateral angles of the pronotum are unarmed; and the abdomen is provided with a basal spine, which reaches the intermediate coxæ. With the exception of one species recorded from Cuba, this genus is confined to the Neotropical Region, and is found in the Central-American, Colombian, Amazonian, and South-Brazilian Subregions. About two thirds of the known species are found in Central America, and are all exceedingly variable. Whether these species are polygoneutic, and whether these variations are seasonal, must be left to the decision of the local observer; but it is at least singular that all the varieties of each species start from, or tend to, one unicolorous form.

A. *Head emarginate in front, the lateral lobes distinctly longer than the central lobe.*

1. **Oplomus dichrous.** (Tab. I. fig. 16.)

Asopus dichrous, Herrich-Schäffer, Wanz. Ins. iv. p. 89, fig. 426[1].

Asopus rhodomelas, H.-S. Wanz. Ins. iv. p. 90, fig. 428[2].

Oplomus rubropictus, Voll. Tijdschr. voor Ent. vi. p. 121. 1.

Oplomus (*Polypœcilus*) *dichrous*, Stål, Ent. Hem. pt. 1, p. 26[3].

Hab. Mexico [1 2 3], Oaxaca (*Mus. Berol.*).

The various forms of this species may be described as follows:—

Var. *a*. Typical.

The abdomen beneath is unicolorous, with the exception of the ventral spine and accompanying basal spot, which are either luteous or testaceous.

Var. *b*.

Differing from var. *a* by the first, second, and base of the third joints of the antennæ, rostrum, and legs being luteous or testaceous (Stål).

Var. *c*.

Greenish black; pronotum with anterior and lateral borders and narrow central longitudinal fascia, scutellum

with crescentic basal fascia and apex, apex of corium, lateral margins of prosternum and abdomen (the last either macular or continuous), ventral spine, basal and discal patch and subapical spot sanguineous.

Oaxaca (*Mus. Berol.*).

Var. *d.*

Similar to var. *c*, but with the first joint of the antennæ, rostrum beyond medium, femora and posterior tibiæ sanguineous.

Stål identifies this var. as the *rubropictus*, Voll.

Var. *e. Asopus rhodomelas*, H.-S. Wanz. Ins. iv. p. 90, fig. 428.

Oaxaca (*coll. Dist.*).

Var. *f.* (Tab. I. fig. 16.)

Pronotum and scutellum sanguineous, the first with four, the latter with three subquadrate black spots. Corium black, with the lateral margin and apex sanguineous.

Oaxaca (*coll. Dist.*).

Var. *g.*

"Varietati e similis, sed colore rufo in flavescentem verso, limboque laterali et apicali ventris late flavescente. ♀." (Var. *f*, Stål.)

Var. *h.*

"Varietati e iterum similis, sed limbo ventris, pedibus nec non antennis basin versus rufo-testaceis. ♀." (Var. *g*, Stål.)

This species also greatly varies in size, specimens ranging from 11 to 15 millims. in length. It appears to be restricted to Mexico.

2. **Oplomus distinctus,** sp. n. (Tab. IV. fig. 11.)

Dark greenish, shining; two large oblong spots at base of pronotum near posterior angle, and apical border of corium luteous. Membrane greenish black; coxæ, bases of femora, and tip of ventral spine obscurely ochreous. Head with the central lobes somewhat acutely pointed and produced beyond the central lobe, coarsely punctate; pronotum and scutellum sparsely but coarsely punctured; corium thickly and more finely punctate. A raised central longitudinal line extending through pronotum and scutellum. Antennæ with the second joint very much longer than the third, remainder wanting. Fore tibiæ only very slightly dilated.

Long. 17 millim., lat. 9 millim.

Hab. Mexico (*coll. Sign.*).

Agrees with the previous species in the shape of the head, but differs from all by the small dilatation of the fore tibiæ.

B. *Head with the central and lateral lobes equal or subequal in length. Scutellum not reaching in length the apical angle of corium; anterior tibiæ impunctate or obsoletely punctured.*

3. **Oplomus tripustulatus.** (Tab. IV. fig. 16.)

Cimex tripustulatus, Fabr. Syst. Rhyng. p. 172. 91.

Cimex tibialis, Fab. Syst. Rhyng. p. 176. 111; Stoll. Pun. fig. 206.

Asopus salamandra, Burm. Handb. ii. 1, p. 381. 11[1]; Walk. Cat. Het. i. p. 120. 4[2].

Oplomus tripustulatus, Dall. List Hem. i. p. 86. 10[3]; Stål, Hem. Fabr. i. p. 15. 1; En. Hem. i. p. 28. 4[4].

Oplomus violaceus, Dall. List Hem. i. p. 85. 8[5].
Oplomus flavoguttatus, Voll. Tijdschr. voor Ent. vi. p. 123. 3.
Oplomus chrysomelas, Walk. Cat. Het. i. p. 121. 18[6].
Oplomus basalis, Walk. Cat. Het. i. p. 122. 19[7].
Oplomus tibialis, Stål, Hem. Fabr. i. p. 16. 2.

Hab. MEXICO, Oaxaca (*Mus. Berol.*), Orizaba[2].—AMAZONS, Ega[6]; COLOMBIA[3 4 5], Santa Marta[4]; ECUADOR[5 6], PERU[1], NORTH BRAZIL.

Of this protean species the var. *salamandra*, Burm., which is contained in the British and Berlin Museums as received from Mexico, and which was described by Burmeister as from Peru, is at present the only representative known in Central America, and is the form figured.

4. **Oplomus nigripennis.** (Tab. IV. fig. 19.) (*O. pulcher*, Tab. III. figg. 13, 14.)
Oplomus nigripennis, Dall. List Hem. i. p. 83. 3[1].
Oplomus pulcher, Dall. List Hem. i. p. 84. 6[2]; Stål, Stett. ent. Zeit. xxiii. p. 86. 23; En. Hem. i. p. 29. 6[3].

Hab. MEXICO[1 2 3] (*coll. Sign.*).

Stål enumerates eight varieties of this species, all of which approximate closely to the three forms figured as above.

5. **Oplomus rutilus.** (Tab. III. fig. 20.)
Oplomus rutilus, Dall. List Hem. i. p. 83. 4[1]; Stål, En. Hem. i. p. 30. 11.
Oplomus biarcuatus, Walk. Cat. Het. i. p. 121. 17[2].

Hab. MEXICO (*coll. Sign.*), Vera Cruz[2].—COLOMBIA[1].

Var. *a*, *rutilus*, Dall. [1], typical.

Var. *b*.

Differs from the type by its larger size, different colour-pattern of the head, larger size of the pronotal and scutellar spots, and by the addition of a large basal transverse spot to the scutellum, and a large discal black spot on the corium. Femora spotted or annulated with testaceous.

This is the form figured as above, and is in the collection of Dr. Signoret from Mexico.

Var. *c*. *O. biarcuatus*, Walk. (Tab. IV. fig. 18.)

Above testaceous. Anterior portion of pronotum with two discal curved black lines. Beneath the broad black marginal borders of the sternum and abdomen as in vars. *a*, *b*, broken into transverse streaks.

The var. *a* has not yet been received from Central America.

6. **Oplomus ventralis.** (Tab. III. fig. 18.)
Oplomus ventralis, Dall. List Hem. i. p. 86. 9; Stål, En. Hem. i. p. 30. 12.

Hab. MEXICO (*coll. Sign.*).

The locality of the type was unknown.

7. **Oplomus mundus.** (Tab. IV. fig. 17.)

Oplomus mundus, Stål, Stett. ent. Zeit. xxiii. p. 87. 24[1]; En. Hem. i. p. 30. 8[2].

Hab. Mexico[1 2] (*Hope coll. Mus. Oxford*).

A specimen of this species in the Hope collection at Oxford has the apex of the scutellum as well as the basal spots red. The figure is from the type in the collection of Dr. Signoret.

C. *Scutellum passing in length the apical angle of corium; anterior tibiæ distinctly punctured on upper surface.* (*Subg.* Stictocnemus, *Stål.*)

8. **Oplomus mutabilis.** (Tab. III. figg. 16 & 19.)

Oplomus mutabilis, Stål, Stett. ent. Zeit. xxiii. p. 87. 25[1].

Oplomus (*Stictocnemus*) *mutabilis*, Stål, En. Hem. pt. 1, p. 30. 9[2].

Hab. Mexico[1 2] (*coll. Sign.*).

Two varieties of this species are figured; and doubtless greater variation exists. It is at once separated from the following species by the emarginated lateral borders of the pronotum. The humeral breadth of the pronotum is twice that of its central longitudinal diameter.

9. **Oplomus proteus.** (Tab. I. fig. 17, Tab. III. figg. 15 & 17.)

Oplomus proteus, Stål, Stett. ent. Zeit. xxiii. p. 88. 26[1].

Oplomus (*Stictocnemus*) *proteus*, Stål, En. Hem. pt. 1, p. 30. 10[2].

Platynopus conspersus, Walk. Cat. Het. i. p. 123. 3[3].

Hab. Mexico[1 2 3] (*Mus. Berol.*, *Hope coll. Mus. Oxford*); Guatemala, Dueñas, Capetillo (*Champion*).

The variation of this species is uniform in its character with that of the other members of the genus. The three forms figured as above embrace the principal characters of the species.

HETEROSCELIS.

Heteroscelis, Latreille, Fam. du Règn. An. p. 419 (1825); Règn. An. v. p. 194 (1829); Lap. Ess. Hém. p. 86 (1832); Stål, En. Hem. i. p. 31 (1870).

Phyllocheirus, Spin. Ess. Hém. p. 306 (1837).

Phyllochirus, A. & S. Hist. des Hém. p. 80 (1843); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 496.

Agerrus, Stål, Öfv. Vet.-Ak. Förh. 1858, p. 434.

Bodetria, Walk. Cat. Het. Hem. i. p. 119 (1867).

This genus can be easily distinguished from the preceding by the length of the head, which is about equal to that of the pronotum. The pronotum has also the lateral angles produced.

Two species only are known—one recorded from North Brazil, and the other from Mexico.

Considerable doubt exists as to the right nomenclature of this genus. Latreille first described *Heteroscelis* as a genus of Coleoptera (Règn. Anim. 1829, ii. 18), and again later in the same work as a genus of Hemiptera. Spinola therefore substituted for the last the name of *Phyllocheirus*, which Amyot and Serville subsequently rectified to *Phyllochirus*. Stål, however (En. Hem. i. p. 31), has resuscitated the name of *Heteroscelis*; and coleopterists have rejected the name on the ground of it having been previously used in Rhynchota. The only reason for this last course appears to be that Latreille had previously (Fam. du Règn. Animal, 1825, p. 419) mentioned or proposed the name *Heteroscelis* as a genus of Hemiptera, without diagnosis, only enumerating that name with seven other generic names under the classification of "Antennes de cinq articles." As, however, coleopterists have rejected the name apparently for this reason, I have followed Stal in using Latreille's generic name.

1. **Heteroscelis lepida.** (Tab. III. fig. 21.)

Phyllochirus lepidus, Stål, Stett. ent. Zeit. xxiii. p. 93. 40[1].
Bodetria scutellaris, Walk. Cat. Het. iii. p. 529[2].
Heteroscelis lepida, Stål, En. Hem. i. p. 31. 2.

Hab. Mexico [1], Vera Cruz [2].

PERILLUS.

Perillus, Stål, Stett. ent. Zeit. xxiii. p. 88 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 496.

Of the seven species which at present constitute this genus, three are found in Central America, and the other four are peculiar to the Nearctic Region.

In structure *Perillus* is allied to *Oplomus*; but the scutellum is much more narrowed, and the ventral spine only reaches the posterior coxæ.

1. **Perillus confluens.** (Tab. I. fig. 18.)

Asophus confluens, H.-S. Wanz. Ins. v. p. 77, fig. 522[1].
Oplomus (*Perillus*) *confluens*, Stål, Stett. ent. Zeit. xxiii. p. 88. 27[2].
Perillus confluens, Stål, En. Hem. i. p. 32. 1[3]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 282. 4[4].

Hab. North America, Texas, New Mexico [4].—Mexico [1 2 3], Oaxaca (*Mus. Berol.*); Brit. Honduras, R. Sarstoon (*Blancaneaux*); Guatemala, Capetillo, Dueñas, San Gerónimo (*Champion*); Costa Rica (*Van Patten*).

Var. *a*.

Body beneath sanguineous. Pronotum with the anterior and lateral margins and submarginal fascia at humeral angles, scutellum with lateral angles and apical half sanguineous.

Var. *b*.

Differing from var. *a* in having only the anterior and lateral borders of the pronotum sanguineous; scutellum unicolorous.

Var. *c*.

Body beneath bluish black, upper surface as in var. *a*.

Var. *d*.

As in var. *c*, but pronotum with a central longitudinal fascia concolorous with lateral borders.

Var. *e*.

As in vars. *c* and *d*, but apex of scutellum alone sanguineous.

Var. *f*.

Above and beneath bluish black, concolorous.

Uhler writes, "thus far only one type of variety of this species has been found in the South-western United States."

2. **Perillus virgatus.** (Tab. III. fig. 22.)

Oplomus (*Perillus*) *virgatus*, Stål, Stett. ent. Zeit. xxiii. p. 89. 28[1].
Perillus virgatus, Stål, En. Hem. i. p. 32. 3[2].

Hab. Mexico[1 2] (*Mus. Berol., coll. Sign.*).

A variety of this species in the collection of the Berlin Museum has the whole disk of the pronotum, corium, and abdomen beneath black.

3. **Perillus circumcinctus.** (Tab. IV. fig. 6.)

Perillus circumcinctus, Stål, Stett. ent. Zeit. xxiii. p. 89. nota[1]; En. Hem. i. p. 32. 4; Riley, 4th Rep. Nox. Ben. Ins. Missouri, p. 19, fig. 6; Uhler, Bull. U.S. Geol. & Geog. ii. p. 282[2]; Proc. Bost. Soc. Nat. Hist. vol. xix. p. 370[3].

Hab. North America, Nebraska, Canada, New England[2 3].—Mexico[1]; Panama[2 3].—Trinidad[2 3].

The specimen figured is from Mexico, and appears to be a varietal form of this species. It is dark olivaceous above, with the antennæ (imperfect in the specimen examined) and legs concolorous. It is from the collection of Dr. Signoret. Prof. Riley states "it is a not uncommon species in Missouri, and was found by Mr. Reed, of London, Ontario, preying voraciously upon potato bugs." [The larvæ of *Doryphora decemlineata* is evidently referred to.]

CORYZORHAPHIS.

Coryzorhaphis, Spinola, Ess. Hém. p. 353 (1837); Dall. List Hem. i. p. 77. 14; Stål, Öfv. Vet.-Ak. Förh. 1867, p. 498.
Coryssorhaphis, A. & S. Hist. des Hém. p. 79 (1843).
Gilva, Walk. Cat. Het. i. p. 141 et 239 (1867).

Four species are known—three hitherto only received from Brazil and Guiana, the other common to Colombia and Central America.

The anterior femora are unarmed, a character which will alone separate this genus

from the preceding. The anterior tibiæ are somewhat dilated; and the abdomen is provided with a basal spine.

1. **Coryzorhaphis cruciata.** (Tab. II. fig. 20.)

Coryzorhaphis cruciata, Stål, En. Hem. pt. 1, p. 38. 2[1].
Coryzorhaphis leucocephala, Dall. (nec Spin.) List Hem. i. p. 103. 1[2].

Hab. British Honduras[2], Rio Hondo (*Blancaneaux*).—Colombia[1].

AUDINETIA.

Audinetia, Ellenberger, Nat. Tijdschr. voor Nederl. Ind. xxiv. p. 136 (1862); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 496; En. Hem. i. p. 45 (1870).

Stål has treated the above as a subgenus of the Linnæan genus *Cimex*, which he thus diagnoses:—"Segmento secundo ventris medio spina vel tuberculo antrorsum prominente armato, vel saltem medio elevato et antrorsum prominulo; marginibus lateralibus anticis thoracis, saltem ante medium, crenulatis." All the species of *Cimex*, however, are common to the Palæarctic, Oriental, and Ethiopian Regions, one of these only being also found in Mexico; and this form is so distinct from the others, and for it alone Ellenberger founded the genus *Audinetia*, that I retain the same here as of generic value.

The abdomen is unarmed, and the anterior thighs very obsoletely spined near apex.

1. **Audinetia spinidens.**

Cimex spinidens, Fab. Mant. Ins. ii. p. 285. 61; Gmel. Syst. Nat. i. 4. p. 2139. 206; Fabr. Syst. Rhyng. p. 161. 29[1].
Asopus geometricus, Burm. Hand. ii. 1, p. 380. 7[2].
Arma geometrica, Dall. Trans. Ent. Soc. v. p. 187. 2, pl. 19. fig. 2[3].
Picromerus spinidens, Dall. List Hem. i. p. 95. 1[4].
Audinetia aculeata, Ellenr. Nat. Tijdschr. voor Ned. Ind. xxiv. p. 137, pl. 1. fig. 1[5].
Arma spinidens, Voll. Faun. Ent. Ind. Néerl. iii. p. 10. 1[6].
Cimex (*Audinetia*) *spinidens,* Stål, Hem. Fab. i. p. 16. 1; En. Hem. i. p. 45. 4[7].

Hab. Mexico, Vera Cruz[7].—Boutan[3]; Tranquebar[1]; Sumatra[6]; Java[2 4 6 7]; Borneo[6].

I include this species in the fauna on the authority of Stål, who records the species from Mexico, in the collection of the Stockholm Museum; he writes:—"Specimen hujus speciei cum copia insectorum Mexicanorum e Vera Cruz misit Dom. Sallé."

MUTYCA.

Mutyca, Stål, Rio Jan. Hem. ii. p. 58 (1868); Öfv. Vet.-Ak. Förh. 1867, p. 496.

Stål thus diagnoses the above:—"Basi ventris spina vel tuberculo depresso lato, apice rotundato-truncato armato; rostro validissimo, apicem versus depresso." The

anterior thighs are armed, and the anterior tibiæ moderately dilated. Humeral angles of the pronotum strongly and prominently produced.

The genus contains but two species, one common to the Neotropical Region, the other apparently confined to the Antilles.

1. **Mutyca grandis.** (Tab. IV. fig. 12.)

Canthecona grandis, Dall. List Hem. i. p. 91. 7[1].
Mutyca grandis, Stål, Stett. ent. Zeit. xxiii. p. 90. 29[2].
Mutyca phymatophora, Stål (part), En. Hem. i. p. 48. 1[3]; Berg (part), Hem. Argent. p. 33. 33.

Hab. Mexico[1 2], Vera Cruz (*coll. Sign.*).—Colombia[1].

Stål[3] considered this species a synonym of the *Pentatoma phymatophora*, Pal. Beauv. I am indebted to the kindness of Dr. Signoret for being able to examine the type of the last-named species, which seems quite distinct and easily recognized from *M. grandis* by the structure and shape of the pronotal spines. These in *M. phymatophora* are not produced forwards, and are acutely pointed, being notched only on the posterior margin, some distance from the tip; the base of the scutellum is more sparsely punctured; and the corium is much less confluently punctured. In the absence of intermediate forms I have therefore considered it distinct. Palissot de Beauvoir described his species as from St. Domingo. Owing to the apparent confusion of the two forms, I have abstained from quoting the habitats given by Stål and Berg, and have for the same reason discarded those of Walker in his Catalogue of Heteroptera.

PODISUS.

Podisus, Herrich-Schäffer, Wanz. Ins. ix. p. 296 (1853); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 497.

In structure this genus differs principally from the preceding genera, which have a more or less triangular scutellum (save in *Coryzorhaphis*), by having the anterior femora unarmed; the anterior tibiæ are not dilated; and the abdomen is armed with a spine at the base. It comprises a considerable number of species, which are, with one exception, common to the Nearctic and Neotropical Regions, including the Antillean Subregion. Stål has founded several subgenera, which are here treated as sections.

A. *Anterior lateral margins of the pronotum crenulated. Lateral angles of the pronotum unarmed.* Apateticus, *Dall.*

1. **Podisus lineolatus.** (*Apateticus halys,* Tab. I. fig. 19.)

Halys lineolata, Herrich-Schäffer, Wanz. Ins. v. p. 69, fig. 514.
Apateticus halys, Dall. List Hem. i. p. 105. 1, pl. 2. fig. 2[1]; Stål, Stett. ent. Zeit. xxiii. p. 93. 39[2].
Podisus punctipennis, H.-S. Wanz. Ins. ix. p. 338[3].
Podisus (*Apateticus*) *halys,* Stål, En. Hem. i. p. 49. 2[4].
Podisus (*Apateticus*) *lineolatus,* Stål, En. Hem. ii. p. 129. 2.

Hab. MEXICO[2 3 4], Oaxaca (*Mus. Berol.*); GUATEMALA, Capetillo, San Gerónimo, Vera Paz (*Champion*); COSTA RICA (*van Patten*), Irazu (*Rogers*).—VENEZUELA[1]; COLOMBIA[4].

The specimen figured is from Costa Rica, and agrees with some specimens from Guatemala in being much darker in colour than ordinary forms, such as the Venezuelan type in the British Museum, or from ordinary Mexican specimens. The species varies greatly in size, specimens having passed through my hands which range in length from 11 millims. to 16 millims. Mr. Dallas's figure is in outline only; and that of Herrich-Schäffer appears much exaggerated in the structure of the pronotum.

2. **Podisus marginiventris.** (Tab. IV. fig. 24.)

Podisus (Apateticus) marginiventris, Stål, En. Hem. i. p. 49. 3[1].

Hab. MEXICO (*Mus. Dist.*), Oaxaca[1].

The figure is from the type in the collection of the Stockholm Museum, and is copied from a coloured drawing of the same, which was very kindly made for that purpose by Dr. Jacob Spångberg. A specimen in my own collection differs from Stål's description in having the legs, rostrum, and first, second, and base of the third joints of the antennæ luteous. The tarsi and apices of the tibiæ are black.

B. *Anterior lateral margins of the pronotum crenulated. Lateral angles of the pronotum produced into more or less distinct spines.*

A. Ventral spine passing the intermediate coxæ.

3. **Podisus tinctus.** (Tab. III. fig. 23.)

Arma tincta, Dall. List Hem. i. p. 97. 4[1]; Stål, En. Hem. i. p. 50. 5[2].

Hab. MEXICO (*coll. Sign.*).—COLOMBIA[1 2].

The Mexican specimen figured is paler in hue than the type, and differs in the absence of the testaceous tinting.

AA. Ventral spine short, not passing posterior coxæ.

4. **Podisus sagitta.** (Tab. I. fig. 22.)

Cimex sagitta, Fabr. Ent. Syst. iv. p. 99. 78; Syst. Rhyng. p. 161. 30.
Pentatoma didyma, Pal. Beauv. Ins. p. 128, Hém. pl. 9. fig. 2.
Arma didyma, A. et S. Hist. des Hém. p. 85. 2; Dall. List Hem. p. 102. 14[1].
Telepta didyma, Stål, Stett. ent. Zeit. xxiii. p. 90. 30[2].
Podisus sagitta, Stål, En. Hem. pt. 1, p. 50. 6[3].
Arma monospila, Walk. Cat. Het. pt. 1, p. 136. 16[4].

Hab. MEXICO[2 3 4]; GUATEMALA, Capetillo, Dueñas, San Gerónimo, Vera Paz (*Champion*); COSTA RICA, Irazu (*Rogers*).—JAMAICA[1]; VENEZUELA[1].

In some specimens the legs are bright pale luteous. The size varies from 11 millims. to 13 millims. in length. The specimen figured is from Costa Rica.

5. **Podisus fuscescens.** (Tab. IV. fig. 20.)

Arma fuscescens, Dall. List Hem. i. p. 102. 15[1].

Podisus (Podisus) fuscescens, Stål (part.), En. Hem. i. p. 50. 10.

Hab. Mexico[1].

The figure is from the type in the collection of the British Museum.

6. **Podisus affinis,** n. sp. (Tab. III. fig. 24.)

Telepta fuscescens, Stål, Stett. ent. Zeit. xxiii. p. 90. 31[1].

Podisus fuscescens, Stål (part), En. Hem. pt. 1, p. 50. 10.

Arma fuscescens, Walk. Cat. Het. pt. 1, p. 135. 9.

Hab. Mexico[1] (*coll. Sign.*), Oaxaca (*Mus. Berol.*); Guatemala, San Gerónimo (*Champion*).—Colombia (*coll. Dist.*).

Stål considered the above synonymous with *P. (Arma) fuscescens*, Dall. It, however, differs at once from that species by the pronotal spines, which are not emarginate or notched as in *P. fuscescens.* Stål describes the antennæ as "articulo apicali apice excepto pallide testaceo-flavescente." In two specimens, however, from Mexico and Guatemala, the antennæ are fuscous, with the base of the apical joint obscure luteous.

7. **Podisus mexicanus,** n. sp. (Tab. IV. fig. 5.)

Above brownish ochreous, lateral margins of the pronotum luteous, membrane brassy. Head thickly and darkly punctured, with the central and lateral lobes of the head about equal in length. Lateral angles of the pronotum slightly prominent, subacute. Pronotum and scutellum somewhat thickly and coarsely punctured, with a raised central longitudinal line extending from behind base of head to apex of scutellum, which also has a dark excavated spot at each basal angle. Corium sparingly punctured, more confluently so on disk. Abdomen above greenish black, connexivum alternately black and orange.

Body beneath luteous, somewhat thickly punctured with brown, with a broad, central, black, longitudinal fascia, much broken on sternum and more prominent on abdomen. Legs pale ochreous, femora somewhat fuscous; rostrum luteous; antennæ fuscous, second joint very much longer than third, remainder wanting. Ventral spine not passing posterior coxæ.

Long. 10 millim., lat. pronot. angl. $5\frac{1}{2}$ millim.

Hab. Mexico (*coll. Sign.*).

Allied to *P. (Arma) ventralis*, Dall., but differs in not having the central lobe of head prominent and slightly passing the lateral lobes. Scutellum in length not reaching apex of corium, lateral angles of pronotum much less prominent.

8. **Podisus modestus.** (Tab. IV. fig. 4.)

Arma modesta, Dall. List Hem. i. p. 101. 13[1]; Fitch, Third Report, p. 72. 101.

Podisus modestus, Stål, En. Hem. i. p. 51. 13[2].

Podisus modestus, Uhler, Bull. U.S. Geol. & Geogr. Surv. iii. p. 399; Proc. Bost. Soc. Nat. Hist. xix. p. 370.

Hab. North America[1 2].—Mexico (*coll. Sign.*).

The specimen figured is from Mexico, and differs from the type in having the pronotal angles more acute. This, however, seems a very variable character, judging from an examination of North-American specimens in the British Museum. Some have the angles subacute, as described by Mr. Dallas; one has them as acutely produced as in the above Mexican form, whilst another, from Lake Huron, partakes of both characters, having the right spine prominently acute and the left subacute. Prof. Uhler records having swept this species from bushes in Colorado during the early part of August; and, according to Mr. Fitch, in New-York State "this is one of our common tree-bugs, and will be met with in autumn upon a number of different trees and shrubs." Mr. Townend Glover quotes Prof. Riley for the fact that it destroys the caterpillars of *Hemileuca maia*.

9. **Podisus nigriventris,** n. sp. (Tab. IV. fig. 14.)

Above ochraceous, shining, thickly punctured with dark brown. Head thickly punctured, central and lateral lobes about equal in length. Pronotum thickly punctured, the lateral angles very strongly and acutely produced, and with a central longitudinal raised line, more prominent on anterior half; crenulated lateral borders luteous, and lateral spines black at apices. Scutellum thickly punctured, somewhat raised and transversely wrinkled at base, and with a central raised longitudinal line. Corium sparingly punctured, more finely and confluently so near interior apical border; membrane dark, shining, brassy. Abdomen above blackish, connexivum alternately luteous and black.

Body beneath concolorous, shining, thickly punctured, abdomen with the ventral spine and a broad central longitudinal fascia black. Legs luteous, femora spotted with brown, tibiæ with the apices and tarsi rosy brown. Rostrum luteous, apical joint rosy brown. Antennæ with the second joint much longer than the third, which is also shorter than the fourth; third and fifth subequal; first and second joints luteous, third and fourth fuscous, narrowly luteous at base, fifth luteous with the tip fuscous. Ventral spine not passing posterior coxæ.

Long. 11 millim., lat. pronot. ang. $6\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

10. **Podisus insignis,** n. sp. (Tab. IV. fig. 15.)

Above luteous, shining, punctured with rosy brown. Head impunctate, anterior and lateral margins and margins of central lobe beyond eyes shining fuscous; base with some obscure rosy markings; eyes black. Pronotum with the lateral angles produced into prominent acute spines, with the tips black; lateral borders with a submarginal row of brown punctures, a central cluster of brown punctures near base, on each side of which is a smaller and less dense aggregation of punctures of the same colour, a few punctures scattered across anterior portion of disk; remainder of pronotum impunctate, glabrate. Scutellum glabrate, a few punctures at centre of base and each basal angle, and two longitudinal bands of punctures at apex. Corium thickly punctured with rosy brown, and with a transverse, impunctate, opaque silky fascia extending half across from inner side of apical margin. Membrane pale hyaline. Abdomen above pale reddish; connexivum alternately luteous and rosy brown. Body beneath luteous, abdomen somewhat punctured and mottled with brown. Legs luteous, femora spotted with brown; rostrum luteous, apical joint rosy brown. Antennæ luteous, with the second joint much longer than the third, which is also shorter than the fourth; third and fifth subequal; apical joint paler in colour, with the tip fuscous. Ventral spine very short. Anterior lateral margins of the pronotum crenulated.

Long. 9 millim., lat. pronot. ang. 5 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

11. **Podisus congrex.** (Tab. I. fig. 20.)

Telepta congrex, Stål, Stett. ent. Zeit. xxiii. p. 91. 33[1].
Podisus congrex, Stål, En. Hem. pt. 1, p. 51. 17.

Hab. Mexico[1] (*Mus. Berol.*); Guatemala, Capetillo, San Gerónimo (*Champion*); Costa Rica, Irazu (*Rogers*).

The pronotal spines vary in colour from dark fuscous to bright rosy red. The size is also inconstant, specimens examined having been found to range from 9 millims. to 13 millims. in length. The specimen figured is from Costa Rica, and was compared and identified by the late Prof. Stål.

12. **Podisus invaria.** (Tab. IV. fig. 21.)

Arma invaria, Walk. Cat. Het. i. p. 135. 15[1].

Hab. Mexico, Oaxaca (*Brit. Mus.*).

The figure is from the type in the British Museum.

C. *Anterior lateral margins of the pronotum not crenulated.*

13. **Podisus iole.** (Tab. IV. fig. 1.)

Telepta jole, Stål, Stett. ent. Zeit. xxiii. p. 92. 35[1].
Podisus iole, Stål, En. Hem. i. p. 52. 20.

Hab. Mexico (*coll. Sign.*).

14. **Podisus thetis.** (Tab. IV. fig. 2.)

Telepta thetis, Stål, Stett. ent. Zeit. xxiii. p. 92. 36[1]; En. Hem. i. p. 52. 21.

Hab. Mexico[1]; Guatemala, Zapote (*Champion*).

The specimen figured is typical, and from the collection of Dr. Signoret. A variety has been received from Guatemala which differs in the upper surface being dark olivaceous; the anterior half of the pronotal lateral borders luteous as in the typical form.

D. *Scutellum ornamented with a macular callosity at each basal angle.*
(*Subg.* Tylospilus, *Stål.*)

15. **Podisus acutissimus.** (Tab. II. fig. 22.)

Podisus (*Tylospilus*) *acutissimus*, Stål, En. Hem. i. p. 53. 27[1].
Tylospilus acutissimus, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 283[2].

Hab. North America, Colorado[2], Texas[1].—Mexico[1]; Guatemala, San Gerónimo (*Champion*).

Stål enumerates the following varieties:—

Var. *a*.
Thorace posterius fusco vel nigricante.

Var. *b*.

Thorace pone medium fascia dilute sanguinea notato.

The specimen figured is typical, and is in the collection of the Stockholm Museum.

16. **Podisus clœlia.** (Tab. II. fig. 21.)

Telepta cloelia, Stål, Stett. ent. Zeit. xxiii. p. 91. 34[1].

Podisus (*Tylospilus*) *cloelia,* Stål, En. Hem. i. p. 53. 28.

Hab. Mexico [1] (*Hope coll., Oxford*).

The specimen figured is in the Stockholm Museum.

17. **Podisus rubro-maculatus,** n. sp. (Tab. VII. fig. 1.)

Luteous, sparingly but distinctly punctate; pronotum with lateral angles and connecting narrow transverse fascia, from the centre of which to apex behind head is a narrow longitudinal line; scutellum with large rounded callosity near each basal angle, central basal spot, and apical margins; sternum with seven spots, two on prosternum, two on mesosternum, and three on metasternum, sanguineous; a black elongated spot on each lateral margin of scutellum a little below the middle, and a small spot of the same colour on disk of corium about one third from apex. Membrane pale hyaline, with two central fuscous streaks. Underside of body, legs, and rostrum luteous, the last with the apex black. Antennæ ochreous.

Long. 8 millim.

Hab. Mexico (*Belimek; Mus. Vind. Cæs.*).

Allied to *P. acutissimus*, Stål, from which it differs in the absence of the luteous macular callosities to the scutellum, and in the lateral angles of the pronotum being somewhat notched behind near its base; the sternal spots and the coloration of the apex of the scutellum are also different; the body, too, is more elongated and straightened.

EUTHYRHYNCHUS.

Euthyrhynchus, Dallas, List Hem. i. p. 77 (1851).

This genus at present comprises but two species, both Neotropical forms, one being also found in the Nearctic Region. It agrees with the preceding genus in having the anterior femora unarmed, but differs in the dilatation of the fore tibiæ and the absence of a basal abdominal spine.

1. **Euthyrhynchus floridanus.** (Tab. I. fig. 21.)

Cimex floridanus, Linn. Syst. Nat. ed. 12, i. 2, p. 719. 26; Fabr. Syst. Ent. p. 702. 29; Goeze, Ent. Beytr. ii. p. 192. 26; Fabr. Spec. Ins. ii. p. 346. 44; Mant. Ins. ii. p. 284. 52; Gmel. Syst. Nat. i. 4, p. 2136. 26; Fabr. Ent. Syst. iv. p. 96. 67; Syst. Rhyng. p. 158. 17.

Cimex punicus, Linn. Syst. Nat. ed. 12, p. 1. 2, p. 719. 31; Fabr. Syst. Ent. p. 703. 33; Goeze, Ent. Beytr. ii. p. 194. 31; Fabr. Spec. Ins. ii. p. 346. 48; Mant. Ins. ii. 285. 56; Gmel. Syst. Nat. i. 4, p. 2138. 31; Fabr. Ent. Syst. iv. p. 97. 71; Syst. Rhynch. p. 159. 20.

Asopus floridanus, Burm. Handb. ii. 1, p. 380. 8; H.-S. Wanz. Ins. iv. p. 102, fig. 450; A. et S. Hist. des Hém. p. 84. 1[1].

Asopus trivittatus, H.-S. Wanz. Ins. iv. p. 103, fig. 451.
Stiretrus floridanus, Blanch. Hist. des Ins. p. 154. 6[2].
Euthyrhynchus floridanus, Dall. List Hem. i. p. 104. 1[3]; Stål, En. Hem. i. p. 54. 1[4].
Euthyrhynchus punicus, Dall. List Hem. i. p. 104. 2, pl. 2. fig. 1[5].
Pentatoma emarginata, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 313. 3.
Arma colorata, Walk. Cat. Het. i. p. 136. 17[6].

Hab. NORTH AMERICA, Philadelphia[1], New Orleans[4].—MEXICO[4 5 6], Vera Cruz[6], Oaxaca[6]; CENTRAL AMERICA[3]; BRITISH HONDURAS, Rio Hondo (*Blancaneaux*); GUATEMALA, San Gerónimo (*Champion*); NICARAGUA (*Belt*); COSTA RICA (*Van Patten*), Irazu, Caché (*Rogers*).—VENEZUELA[3]; COLOMBIA[3 4 5]; BRAZIL[2].

This is a very variable form; the following Central-American varieties have alone passed through my hands:—

♂. Var. *a*.

Above green; scutellum with basal angles and apex orange; head beneath, rostrum, and abdomen orange, the last broadly marked with green on the disk near the apex; sternum and legs shining bluish green; prosternum with an anterior central patch of orange-yellow.

Var. *b*.

Above as in var. *a*; beneath with the central portion of sternum, abdomen, coxæ, basal halves of femora and rostrum orange-yellow; abdomen marked with green as in var. *a*.

♀. Var. *a*. As figured Tab. I. fig. 21.

The markings are either red or luteous.

This is the form described by Walker under the name of *Arma colorata*[6].

It is this insect which Mr. Belt (Nat. in Nicaragua, p. 127) refers to as *Pentatoma punicea*. He describes his surprise at on two occasions finding this bug sucking the juices from dead specimens of a "bright green rosechafer." Mr. Belt remarks:—"The bug has weak limbs; and the beetle is more than twice its size and weight, and is very active, quickly taking wing; so that the only way in which it could have been overcome that I can think of, is by the bug creeping up, and quietly introducing the point of its sharp proboscis between the rings of its body when the beetle was sleeping, and injecting some stupifying poison. In both instances that I witnessed, the bug was on a leaf of a shrub, with the bulky beetle hanging over, suspended on its proboscis."

TYNACANTHA.

Tynacantha, Dall. List Hem. i. pp. 77 & 106 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 497.

Three species of this genus are enumerated, all belonging to the Neotropical Region, one at present only having been received from Central America. The anterior femora are unarmed; the lateral angles of the pronotum not produced, nor the margins denticulated; the abdomen is provided with a basal spine; the second and third joints of the antennæ are subequal.

1. **Tynacantha pulchricornis.** (Tab. IV. fig. 3.)

Telepta pulchricornis, Stål, Stett. ent. Zeit. xxiii. p. 90. 32[1].
Tynacantha pulchricornis, Stål, En. Hem. i. p. 56. 3.

Hab. Mexico[1].

The specimen figured is from Mexico, and is in the collection of Dr. Signoret.

Subfam. *CYRTOCORINÆ.*

Oxynotidæ, Dallas, List Hem. i. p. 74 (1851).
Oxynotina, Stål, En. Hem. ii. p. 3 (1872).

This subfamily contains but one genus, which comprises five known species, all confined to the Neotropical Region, of which but two have as yet been recorded from Central America.

CYRTOCORIS.

Cyrtocoris, White, Trans. Ent. Soc. Lond. iii. p. 89 (1842).
Coptosoma, subg. *Oxynotus,* Lap. Ess. Hém. p. 74 (1832).
Oxynotus, Dall. List Hem. i. p. 75 (1851); Stål, En. Hem. ii. p. 3 (1872).

The name *Oxynotus* having been used in ornithology by Swainson in 1831, and by a less followed writer, Rafinesque, in Pisces in 1810, it is clearly right to follow Adam White, and use the name he substituted. This genus is of somewhat aberrant form from all the allied genera; the more or less hexagonal thorax and the scutellum, which does not cover the margins of the wings and is spinous on its disk, are well-marked characters by which it may be identified. The tarsi are two-jointed.

1. **Crytocoris gibbus.**

Tetyra gibba, Fabr. Syst. Rhynch. p. 141. 63; Schjödte in Kröyer, Nat. Tidsskr. iv. p. 303. 21.
Oxynotus gibbus, Lap. Ess. Hém. p. 74, pl. 55. f. 6; Hahn, Wanz. Ins. iii. p. 28, f. 250[1]; Germ. Zeitschr. i. p. 44. 1[2]; A. & S. Hist. des Hém. p. 59. 1[3]; Dall. List Hem. i. p. 75. 1[4]; Stål, Hem. Fabr. i. p. 15. 1; En. Hem. ii. p. 3. 1[5].
Podops gibbus, Burm. Handb. ii. 1, p. 386. 1[6]; Blanch. Hist. iii. p. 160. 1.
Stoll, Pun. f. 281.

Hab. Guatemala, Zapote (*Champion*).—Colombia[4]; Venezuela[4]; Brazil[1 2 3 4 5], Rio Janeiro[5 6].

2. **Cyrtocoris trigonus.**

Oxynotus trigonus, Germ. Zeitschr. i. p. 44. 2[1]; Stål, En. Hem. ii. p. 3. 2[2].

Hab. Mexico[2].—Colombia[2]; Brazil[1], Minas Geraes[2], Rio Janeiro[2].

This species is included in the fauna from the record of Prof. Stål. We have neither received this insect from Central America, nor have I yet been able to examine a specimen. It should be readily distinguished from the last species by the character given by Germar, "*scutello tuberculo trigono, apice truncato.*"

Subfam. *DISCOCEPHALINÆ.*

Discocephalida, Stål, Hem. Fabr. i. p. 17 (1868).
Discocephalina, Stål, En. Hem. ii. p. 4 (1872).

At present this subfamily includes eighteen genera, all of which are peculiar to the Neotropical Region, excepting one genus, which contains a species which is common to both the Neotropical Region and Europe. Six of these genera are represented in Central America.

DRYPTOCEPHALA.

Dryptocephala, Laporte, Ess. Hém. p. 56 (1832); A. & S. Hist. des Hém. p. 118 (1843); Fieb. Rhynch. p. 8 (1851); Dall. List Hem. i. pp. 131, 148; Stål, Öfv. Vet.-Ak. Förh. 1867, p. 499; En. Hem. ii. p. 4 (1872).
Storthia, Perty, Del. p. 215 (1834); H.-S. Wanz. Ins. vii. p. 41 (1844).

This genus is well marked and peculiar from the others here enumerated by the head, which is lobate or deeply divided at the apex, and is provided with a spine on each side in front of the eyes; the lateral margins of the pronotum are ampliated. Nine species are enumerated, all common to the Neotropical Region, but none of which have hitherto been recorded from Central America. One of these is now included.

1. **Dryptocephala obtusiceps.** (Tab. IV. fig. 23.)

Dryptocephala obtusiceps, Stål, En. Hem. ii. p. 4. 4[1].

Hab. Panama (*coll. Dist.*).—Colombia, Bogota[1].

I have felt no hesitation in identifying this insect from Stål's description, not having seen the type. The eroded condition of the lateral margin of the pronotum allies it to *D. punctata* and *D. livida*, as Stål has clearly pointed out, from which it seems well separated by the structure of the lateral lobes of the head.

DISCOCEPHALA.

Discocephala, Laporte, Ess. Hém. p. 57 (1832); A. & S. Hist. des Hém. p. 122 (1843); Dallas, List Hem. i. pp. 131 et 146 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 499; En. Hem. ii. p. 5 (1872).
Platycarenus, Fieb. Eur. H. pp. 77, 326 (1861).

This genus may be differentiated from the preceding one by the following characters:—the ampliated head, which at the base is as broad or broader than the base of the scutellum; and the length of the first joint of the rostrum, which, inserted towards the base of the head, about reaches the anterior coxæ. The species are all Neotropical; one is also found in Europe; and four are common to Central America. Stål enumerates altogether fifteen species; and this is probably about the extent of the genus. Walker (Cat. Het.) has described ten other species; but the only Central-American one proves to be of synonymic value; and it is possible that the others will have to be estimated in the same manner.

A. *Lateral margins of the head distinctly sinuated.*

1. **Discocephala humilis.** (Tab. IV. fig. 22.)

Discocephala humilis, Herrich-Schäffer, Wanz. Ins. vii. p. 39, f. 716[1]; Fieb. Rynch. p. 30. 3; Stål, Hem. Fabr. i. p. 18. 6.

Discocephala (*Platycarenus*) *humilis,* Stål, En. Hem. ii. p. 6. 5[2].

Hab. GUATEMALA, Capetillo and San Juan, Vera Paz (*Champion*); PANAMA (*coll. Dist.*).—COLOMBIA[1 2].

2. **Discocephala notulata.** (Tab. V. fig. 1.)

Discocephala notulata, Stål, Stett. ent. Zeit. xxiii. p. 96. 50[1]; Hem. Fabr. i. p. 18. 7.

Discocephala (*Platycarenus*) *notulata,* Stål, En. Hem. ii. p. 6. 4[2].

Hab. MEXICO[1 2] (*coll. Sign.*).

This species is closely allied to the preceding, *D. humilis,* H.-S., but differs in the absence of the strongly marked transverse impression to the pronotum, and in not having the anterior marginal angle of the pronotum rounded as in that species.

B. *Lateral margins of the head slightly and indistinctly sinuated.*

3. **Discocephala clypeata.** (Tab. VI. fig. 1.)

Discocephala clypeata, Stål, Stett. ent. Zeit. xxiii. p. 96. 51[1]; Hem. Fabr. i. p. 18. 8.

Discocephala inobtrusa, Walk. Cat. Het. i. p. 183. 3[2].

Discocephala (*Platycarenus*) *clypeata,* Stål, En. Hem. ii. p. 6. 6[3].

Hab. MEXICO[1 3] (*coll. Sign.*), Oaxaca, Orizaba, Vera Cruz[2]; BRITISH HONDURAS, Rio Hondo (*Blancaneaux*); PANAMA, Matachin (*Dr. Thieme, coll. Oberthür*).

4. **Discocephala marginella.** (Tab. V. fig. 2.)

Discocephala (*Platycarenus*) *marginella,* Stål, En. Hem. ii. p. 6. 7[1].

Hab. MEXICO[1]; GUATEMALA, Capetillo and San Juan, Vera Paz (*Champion*).

This species is very closely allied to the preceding; but, from an examination of a typical specimen forwarded to me from the Stockholm Museum with one of *D. clypeata,* kindly lent me by Dr. Signoret, I find the differences are well pointed out by Stål; the principal and guiding one, however, is the impunctate margin of the pronotum and the base of the corium.

DINOCORIS.

Dinocoris, Burm. Handb. ii. 1, p. 363 (1835), partim; H.-S. Wanz. Ins. iii. p. 65 (1836); Stål, En. Hem. ii. p. 7 (1872).

Empicoris, Spin. Ess. Hém. p. 282 (1837), partim.

Cataulax, A. et S. Hist. des Hém. p. 111 (1843), nec Spin.

Mecistorhinus, Dall. List Hem. i. pp. 152, 162 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 501.

Antiteuchus, Dall. List Hem. i. pp. 152, 163 (1851); Stål, Ofv. Vet.-Ak. Förh. 1867, p. 501.

This genus has the abdomen provided beneath with a distinct longitudinal furrow; the basal joint of the antennæ does not reach the apex of the head; and the lateral margins of the pronotum are smooth, not denticulated.

Dinocoris is peculiar to the Neotropical fauna; three species are found in Central America.

A. *Second joint of the antennæ shorter than the first.*

1. **Dinocoris tripterus.** (Tab. V. fig. 3.)

Cimex tripterus, Fabr. Mant. ii. p. 294. 144; Gmel. Syst. Nat. i. 4, p. 2151. 300; Fabr. Ent. Syst. iv. p. 116. 139.
Edessa triptera, Fabr. Syst. Rhynch. p. 153. 36[1].
Cataulax apicalis, Er. in Schomb. Reis. iii. p. 609[2].
Antiteuchus tripterus, Stål, Hem. Fab. i. p. 19. 3.
Dinocoris (*Mecistorhinus*) *tripterus*, Stål, En. Hem. ii. p. 8. 3[3].
Dinidor punctiger, Hope, Cat. i. p. 25.
Antiteuchus punctiger, Dall. List Hem. i. p. 164. 3[4].
Cataulax centralis, Walk. Cat. Het. iii. p. 566[5].
Dinocoris punctiger, Stål, En. Hem. ii. p. 9. 15.

Hab. Mexico (*Mus. Berol.*); British Honduras, Belize (*Blancaneaux*); Nicaragua, Chontales (*Janson*); Panama (*coll. Dist.*).—Venezuela[4]; Guiana, Demarara[2 4]; Surinam[3]; Cayenne[1]; Amazons, S. Paulo[5].

This species is closely allied to *D. sepulcralis*, Fab., var., as figured by Stoll, Pun. fig. 94. Stål has described the antennæ of both species (Hem. Fab. i. pp. 18 et 19), by which I differentiate it. The first joint in this species is longer than the second, but not "*fere duplo longiore*" as in *D. sepulcralis*; the third joint is rather more than three times as long as the second, but not "*plus quadruplo, fere quintuplo longiore*" as in the other Fabrician species. In the specimen examined from the Berlin Museum, the first and second joints appear almost equal in length.

I consider the *Dinidor punctiger*, Hope, as a varietal form of this species, on the authority of Prof. Westwood, to whom I forwarded a specimen of the form here figured, and who writes me "seems to be a variety of my *punctiger*, not having the very decided linear arrangement of the spots on the corium." This appearance, however, is shown in one of the specimens identified by Dallas, but is absent in the second.

B. *First and second joints of the antennæ subequal in length.*

2. **Dinocoris piceus.** (Tab. V. fig. 4.)

Pentatoma picea, Palis. Beauv. Ins. p. 148, Hém. t. 10. f. 3[1].
Dinidor unicolor, Hope, Cat. i. p. 25.

Var.

Dinocoris (*Mecistorhinus*) *piceus*?, Stål, En. Hem. ii. p. 8. 6[2].
Antiteuchus piceus, Dall. List Hem. i. p. 165. 6[3].

Hab. British Honduras, Belize (*Blancaneaux*); Guatemala, La Tinta (*Champion*).—Antilles, St. Domingo [1]; British Guiana [3]; Brazil [2].

All the specimens examined, including the two identified by Dallas in the British Museum, agree with the characters given by Stål as appertaining to this species.

The base of the fourth and the base and apex of the fifth joint of the antennæ are luteous, the first and second joints subequal in length, the disk of the abdomen beneath castaneous, and the legs pitchy or castaneous. Palisot de Beauvoir describes the colour as "presque uniforme." The specimen figured is from Guatemala.

3. **Dinocoris obscurus.** (Tab. VI. fig. 3.)

Antiteuchus? *obscurus,* Dall. List Hem. i. p. 165. 8[1].
Dinocoris (*Mecistorhinus*) *obscurus,* Stål, En. Hem. ii. p. 8. 9[2].

Hab. Mexico [1 2].

The specimen figured is the type in the collection of the British Museum.

EURYSTETHUS.

Eurystethus, Mayr, Verh. z.-b. Ges. Wien, xiv. p. 907 (1864); Reise, Nov. Hem. p. 38 (1866); Stål, En. Hem. ii. p. 10 (1872).

This genus was founded by Dr. Mayr for the reception of a Brazilian species, which he named *E. nigro-punctatus.* I have here added another species to the genus, which has been received from Panama. The basal joint of the antennæ does not reach the apex of the head; the second joint is a little shorter than the third; the lateral lobes of the head are reflexed, longer than the central and cleft at apex; there is a strong spine in front of the eyes (Dr. Mayr describes this character, founded on the other species, as "denticulo obtuso ante oculos subpetiolatus), the anterior angles of the pronotum are produced into transverse spines, and the posterior angles prominent and rounded.

1. **Eurystethus signoreti,** n. sp. (Tab. VI. fig. 13.)

Ochraceous, thickly punctured with brown. Head finely punctate, the lateral margins narrowly impunctate, with a central longitudinal impunctate line which does not reach apex. Pronotum rugosely punctate, a pale, raised, levigate, transverse line between humeral angles, from which to anterior margin is a pale, impunctate, obscure, submarginal line, and one of like character enclosing a large central lenticular space; lateral margins impunctate; posterior lateral angles rounded, notched behind. Scutellum thickly punctate, with a raised convex longitudinal ridge, very broad at the base, and narrowed towards apex. Corium thickly punctate, membrane pale ochraceous. Underside of body ochraceous, thickly punctured with brown; stigmata pitchy; legs luteous, spotted with brown. Antennæ ochraceous; rostrum luteous, just passing posterior coxæ.

Long. 8 millim.

Hab. Panama (*coll. Signoret*).

Differs from *E. nigro-punctatus,* the other species of the genus, by the strong spines

in front of the eyes, the different shape of the posterior lateral angles of the pronotum, and the length of the scutellum, which slightly passes the apex of the corium. *E. signoreti* differs in some slight respects from the generic diagnosis of Dr. Mayr, as in the length of the rostrum; but as that diagnosis was based on one species only, I have felt no hesitation in including this species in the genus.

PELIDNOCORIS.

Pelidnocoris, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 501; En. Hem. ii. p. 10 (1872).

This genus now comprises but one species, and is thus, according to our present knowledge, restricted to Mexico. The basal joint of the antennæ does not reach the apex of the head, thus agreeing with the previous genus; the pronotum, however, as described by Stål, has "angulis lateralibus productis, marginibus lateralibus anticis foliaceis, lobatis." The head also is described as "ad oculos spina longa vel lobo spiniformi armato, jugis tylo longioribus, ante hunc contiguis." I have not been able to examine a specimen of this genus; but the above characters, abstracted from Stål's full generic diagnosis, are, apparently at least, characteristic.

1. **Pelidnocoris stålii.** (Tab. VII. fig. 2.)

Pelidnocoris stålii, Haglund, Stett. ent. Zeit. xxix. p. 150. 1[1].

Hab. Mexico [1].

But one specimen is apparently at present contained in collections, *i. e.* the type in the Stockholm Museum, for a coloured figure of which we are indebted to the obliging assistance of Prof. Lindström.

EMPICORIS.

Dinidor, subg. *Dinidor*, Laporte, Ess. Hém. p. 64 (1832), nec Latr.
Empicoris, Hahn, Wanz. Ins. ii. p. 55 (1834); Stål, En. Hem. ii. p. 10 (1872).
Dinocoris, Burm. Handb. ii. 1, p. 363 (1835) (partim).
Dinocoris, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 501.
Dinidor, A. & S. Hist. des Hém. p. 110 (1843); Dall. List Hem. i. p. 151 (1851), nec Latr.
Bryelica, Walk. Cat. Het. iii. p. 547 (1868).

This genus, as thus constituted by Stål, has the basal joint of the antennæ extending beyond the apex of the head; this character, with the structure of the head, will at once separate *Empicoris* from *Dinocoris*.

About eight species are known, all confined to the Neotropical Region, one only having been as yet recorded from Central America.

1. **Empicoris ramosa.** (Tab. VI. fig. 4.)

Bryelica ramosa, Walker, Cat. Het. iii. p. 547[1].
Empicoris ramosus, Stål, En. Hem. ii. p. 11. 7[2].

Hab. Mexico[2], Oaxaca[1].

The type is figured, contained in the collection of the British Museum.

Subfam. *PENTATOMINÆ.*

Pentatomina, Stål, En. Hem. ii. p. 12 (1872); v. p. 28 (1876).

This subfamily is universally distributed, but reaches its maximum in number, size, and coloration in the tropical parts of the Old World. Central America in this group is moderately rich, and contains both identical and representative species of the Nearctic fauna, which in this subfamily has a strongly marked Palæarctic facies, and also possesses most of the striking and more beautiful forms of the Neotropical Region. Taking the Nearctic and Neotropical faunas together, and comparing them with those of the Ethiopian, Oriental, Australian, and extra-European portion of the Palæarctic Regions, we find that the American Pentatominæ compare in a proportion of about one third the number of genera, and rather more than three fourths of the total enumeration of species.

MACROPYGIUM.

Macropygium, Spinola, Ess. Hém. p. 287 (1837); Dall. List Hem. i. p. 150 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 523, En. Hem. ii. p. 12 (1872).
Oxyrhinus, A. & S. Hist. des Hém. p. 113 (1843).

This genus contains two species, both peculiar to the Neotropical Region, and both found in Central America. The head is armed with a spine near the eyes, and the lateral margins from these to the apex sinuated, the lateral lobes of the head longer than the central; the second joint of the antennæ shorter than or subequal in length to the first.

1. **Macropygium reticulare.** (Tab. V. fig. 5.)

Cimex reticularis, Fabr. Syst. Rhynch. p. 170. 85.
Macropygium atrum, Spin. Ess. Hém. p. 288[1]; Herrich-Schäffer, Wanz. Ins. vii. p. 48[2]; Dall. List Hem. i. p. 158. 1[3].
Pentatoma bifida, Hope, Cat. i. p. 43.
Oxyrhinus subsulcatus, A. & S. Hist. des Hém. p. 113. 1, pl. 12. f. 2[4].
Macropygium subsulcatum, Dall. List Hem. i. p. 158. 2[5].
Macropygium spinolæ, Stål, Rio. Hem. i. p. 18. 1[6].
Macropygium reticulare, Stål, Hem. Fabr. i. p. 23. 1; En. Hem. ii. p. 12. 1[7].
Ochlerus guttipes, Walk. Cat. Het. i. p. 193. 3[8].

Hab. Mexico[7], Oaxaca (*coll. Dist.*), Orizaba[8]; Guatemala, Zapote (*Champion*); Nicaragua, Chontales (*coll. Dist.*).—Colombia[3 7]; Venezuela[3]; Trinidad (*coll. Dist.*); British Guiana[5], Cayenne[4]; Brazil[1 2 7], Rio Janeiro[6 7].

This species varies in colour from black to pitchy castaneous; and the legs are either ferruginous and unicolorous or spotted with fuscous.

2. **Macropygium parvum,** n. sp. (Tab. VI. fig. 2.)

Closely allied to the preceding species, but much smaller; head more triangular, less produced and straightened, lateral lobes much less cleft at apex; fifth joint of antennæ considerably longer than fourth; lateral margins of pronotum obscurely sinuated. Legs ochreous, more or less spotted with fuscous, fore tibiæ annulated with fuscous at middle and apex.

Long. 7 to 8 millims.

Hab. PANAMA (*coll. Dist., coll. Sign.*).

OCHLERUS.

Ochlerus, Spin. Ess. Hém. p. 294 (1837); Dall. List Hem. i. p. 150 (1851); Stål, Ofv. Vet.-Ak. Förh. 1867, p. 524.

Menipha, A. & S. Hist. des Hém. p. 112 (1843).

Two species only of this genus are recorded, one of which forms part of this fauna. Both are Neotropical forms. It differs from *Macropygium* in not having the head armed with a spine near the eyes, the lateral margins are also almost straight or very slightly sinuated from the eyes to the apex.

1. **Ochlerus marginatus.**

Cimex marginatus, Fabr. Syst. Rhynch. p. 171. 86[1].

Ochlerus cinctus, Spin. Hém. Ess. p. 295[1]; Dall. List Hem. i. p. 156. 1[2].

Cimex flavicinctus, H.-S. Wanz. Ins. iv. p. 94, f. 435[3].

Menipha brunnea, A. & S. Hist. des Hém. p. 113. 1, pl. 12. f. 1[4].

Ochlerus flavocinctus, H.-S. Wanz. Ins. vii. p. 64.

Ochlerus coriaceus, H.-S. Wanz. Ins. vii. p. 64, f. 734[5].

Ochlerus lutosus, H.-S. Wanz. Ins. viii. p. 65, f. 735[6].

Ochlerus circumcinctus, Stål, Rio. Hem. i. p. 17. 1[7].

Ochlerus marginatus, Stål, Hem. Fabr. i. p. 23. 1; En. Hem. ii. p. 13. 1[8].

Hab. MEXICO[2]; NICARAGUA, Chontales (*coll. Dist.*); PANAMA (*coll. Dist.*).—COLOMBIA[5]; GUIANA, Surinam[8]; BRAZIL[1 3 4 6 8], Para[8], Rio Janeiro[7 8].

Stål thus well describes the variation of this species:—"variat marginibus lateralibus capitis et thoracis concoloribus vel flavescentibus, limbo abdominis concolore, flavescente, vel maculis flavescentibus aut ferrugineis notato."

MELANODERMUS.

Melanodermus, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 524; En. Hem. ii. p. 13 (1872).

This genus is divided from the last by the produced and acuminate anterior angles of the pronotum. It consists of three species, all Neotropical, of which one is here included.

1. **Melanodermus tartareus.** (Tab. V. fig. 6.)

Ochlerus tartareus, Stål, Stett. ent. Zeit. xxiii. p. 98. 54[1].
Melanodermus tartareus, Stål, En. Hem. ii. p. 13. 2[2].

Hab. Mexico [1 2] (*coll. Sign.*).—Colombia ?[2].

The figure is from a typical specimen from the collection of Dr. Signoret.

BROCHYMENA.

Brochymena, Amyot & Serville, Hist. des Hém. p. 106 (1843); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 525.

This is a Nearctic genus, which has extended to the Neotropical Region as far as Central America.

The abdomen is marked with a longitudinal furrow, the membranal veins are irregular; and a good character, as pointed out by Stål, is "metastethio spiracula segmenti primi ventris tegente."

1. **Brochymena myops.**

Brochymena myops, Stål, En. Hem. ii. p. 16. 1[1]; Uhler, Bull. U.S. Geol. & Geog. Surv. vol. ii. p. 283[2]; Proc. Bost. Soc. Nat. Hist. vol. xix. p. 373, excl. syn.[3]
Halys quadripustulata, Herrich-Schäffer, Wanz. Ins. vii. p. 57, fig. 729, excl. syn.

Hab. North America, Alabama [3], N. Carolina [3], Louisiania [1 2], Texas [2], New Mexico [2]. —Mexico [1].

This species is here inserted on the authority of the late Prof. Stål.

2. **Brochymena quadripustulata.**

Cimex 4-pustulatus, Fabr. Syst. Ent. p. 704. 39; Goeze, Ent. Beitr. ii. p. 238. 8; Fabr. Spec. ii. p. 347. 55; Mant. ii. p. 285. 64; Ent. Syst. iv. p. 100. 81.
Cimex quadripustulatus, Gmel. Syst. Nat. i. 4, p. 2140. 209.
Halys 4-pustulata, Fabr. Syst. Rhynch. p. 182. 9.
Halys serrata, Palis. Beauv. Ins. p. 187, Hém. pl. 11. f. 8.
Halys pupillata, H.-S. Wanz. Ins. iv. p. 104, f. 453; vii. p. 58[1].
Brochymena serrata, A. & S. Hist. des Hém. p. 107. 1; Dall. List Hem. i. p. 188. 3, excl. syn. Fabr. et Wolffii (Stål)[2].
Brochymena quadripustulata, Stål, En. Hem. ii. p. 16. 2[3].

Hab. North America, Wisconsin[3], Georgia[1 2]; Mexico (*coll. Sign.*), Oaxaca (*coll. Dist.*).

Amyot and Serville give as habitat of their synonym of this species, "Royaumes d'Oware et de Benin," which is clearly incorrect.

Prof. Stål gives the relative lengths of the lobes of the head as a sectional character for dividing the species of this genus. This seems, however, an untrustworthy character; for with this species two specimens in my own collection vary in this respect, and

in a third, from the collection of Dr. Signoret, the lobes are subequal in length. It can, however, be easily separated from *B. cariosa*, Stål, which is described as having "jugis tyloque æque longis," by the length of the second joint of the antennæ, which is shorter than the third.

3. **Brochymena obscura.** (*B. tenebrosa*, Tab. VI. fig. 5.)

Halys obscura, Herrich-Schäffer, Wanz. Ins. v. p. 68, f. 513[1]; vii. p. 59.

Brochymena obscura, Stål, En. Hem. ii. p. 16. 4[2]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 283. 3[3]; Wheeler's Rep. Geogr. Expl. 1875, v. Zool. p. 829[4].

Brochymena tenebrosa, Walk. Cat. Het. i. p. 231. 7[5].

Hab. North America, California [3 4], Arizona [3].—Mexico [1] (*Mus. Berol.*), Oaxaca [2 5].

The specimen figured is the *B. tenebrosa*, Walk., in the collection of the British Museum, a bright-coloured variety of this species.

4. **Brochymena arborea.**

Pentatoma arborea, Say, Journ. Ac. Phil. iv. p. 311. 1; Compl. Writ. ii. p. 239. 1.

Halys erosa, H.-S. Wanz. Ins. v. p. 70, f. 515; vii. p. 56[1].

Brochymena arborea, Dall. List Hem. i. p. 188. 1[2]; Stål, En. Hem. ii. p. 17. 6[3]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 283. 4[4]; Proc. Bost. Soc. Nat. Hist. xix. p. 372[5]; Town. Glover, Ills. Ins. Hem. p. 27, pl. 11. f. 26[6].

Hab. N. America [1], St. John's Bluff [2], Massachusetts [5], Texas [3 4], "East. reg. U. S., from Maine to Florida" [4], New Mexico [4].—Mexico [2 4].

Mr. Glover writes of this species [6]:—"Ins. found on trees in Maryland, and not uncommon." "Lives on trees in the city of Baltimore, and was active as late as December 10 of 1874, in the streets on door-steps (P. R. U.)."

5. **Brochymena hædula.** (Tab. V. fig. 7.)

Brochymena hædula, Stål, Stett. ent. Zeit. xxiii. p. 99. 57[1]; En. Hem. ii. p. 17. 7[2].

Hab. Mexico [1], Oaxaca [2]; Guatemala, San Gerónimo, Vera Paz (*Champion*).

The specimen figured is from Mexico, in the collection of Dr. Signoret. Specimens of this species vary much in colour, as obtains in *B. obscura*, previously enumerated.

COSMOPEPLA.

Cosmopepla, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 525.

In this genus the lobes of the head are of equal length, the scutellum broad and rounded at the apex, the lateral angles of the pronotum are rounded or subprominent, and the nervures of the membrane are longitudinal and simple. The species are found both in the Nearctic and Neotropical Regions; four only are at present recorded, of which two are here included.

Its affinity is with the genus *Stollia*, found in the Palæarctic, Oriental, and Australian Regions.

1. **Cosmopepla decorata.**

Eysarcoris decoratus, Hahn, Wanz. Ins. ii. p. 117. f. 198[1]; Dall. List Hem. i. p. 225. 1[2].
Pentatoma decorata, H.-S. Wanz. Ins. vii. p. 96.
Cosmopepla decorata, Stål, En. Hem. ii. p. 19. 2[3]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 284[4].

Hab. North America, Texas[4], Arizona[4].—Mexico[1 2 3 4], Oaxaca (*Mus. Berol.*); Guatemala[4], San Gerónimo (*Champion*); Costa Rica (*Mus. Berol.*), Irazu (*Rogers*).

Prof. Uhler thinks it probable that this species, the following (*C. conspicillaris*), and *C. carnifex* constitute in reality but one species. He considers the last as "the continental form, but which does not cross the meridian of the Sierra Nevada Mountains; the second does not cross beyond the eastern base of the Rocky Mountains," whilst *C. decorata* "is the subtropical southern form." All the specimens, however, which I have seen, or which we have received from Central America, have been constant in character; and this view was taken by Prof. Stål, who described a fourth species from Colombia.

2. **Cosmopepla conspicillaris.** (Tab. V. fig. 8.)

Eysacoris conspicillaris, Dall. List Hem. i. p. 225. 2[1].
Cosmopepla conspicillaris, Stål, En. Hem. ii. p. 19. 4[2]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 284. 2[3]; Wheeler's Rep. Geog. Expl. v. Zool. p. 830[4].

Hab. North America, Vancouver's Island[3], Colorado[3], California[1 3 4].—Mexico[2 3] (*coll. Sign.*).

Prof. Uhler describes this as "a most variable species, both in colour and size. Specimens measure from 4 to $7\frac{1}{2}$ millims. in length by 3 to 5 millims. in width. The orange band across the pronotum sometimes invades almost two thirds of its surface posteriorly, and the black colour is replaced by pale dirty rufous."

MORMIDEA.

Mormidea, Amyot et Serville, Hist. des Hém. p. 134 (1843); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 527.

This genus is differentiated at once from the preceding by the shape of the scutellum, which is more or less triangular; it agrees with it, as Stål has accurately diagnosed, in the character "tibiis omnibus teretibus, sulco destitutis;" and is separated from the following genus *Œbalus* by "articulo primo rostri bucculas paullo superante." It is confined to North and Tropical America; and in the Old World its nearest congener is the Ethiopian genus *Aspavia*. It exhibits a strikingly variable character in the structure of the pronotum, the lateral angles of which are generally found in the same species either produced and spinous or obtusely rounded.

1. **Mormidea lugens.**

Cimex lugens, Fabr. Syst. Ent. p. 716. 98; Goeze, Ent. Beitr. ii. p. 148. 26; Fabr. Spec. ii. p. 360. 133; Mant. ii. p. 297. 174; Gmel. Syst. Nat. i. 4. p. 2155. 321; Fabr. Ent. Syst. iv. p. 125. 175; H.-S. Wanz. Ins. v. p. 66. f. 510[1].

Cimex albipes, Fabr. Ent. Syst. Suppl. p. 535. 162–3; Syst. Rhynch. p. 177. 114[2].

Cydnus lugens, Fabr. Syst. Rhynch. p. 187. 12; Wolff, Ic. Cim. v. p. 186, f. 180.

Cimex gamma, Fabr. Syst. Rhynch. Ind. p. 7.

Pentatoma punctipes, Palis. Beauv. Ins. p. 113, Hém. t. 8. f. 6[3]; Say, Journ. Ac. N. Sc. Philad. iv. p. 313. 4; Compl. Writ. ii. p. 241. 4[4].

Pentatoma gamma, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 322. 22[5].

Pentatoma lugens, H.-S. Wanz. Ins. vii. p. 96; Dall. List Hem. i. p. 248. 39[6].

Mormidea lugens, Stål, Stett. ent. Zeit. xxiii. p. 103. 73[7].

Mormidea (Melanochila) lugens, Stål, En. Hem. ii. p. 19. 1[8]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 285. 1[9]; iii. p. 402[10].

Hab. North America[1 5 6 8 10], United States[4], New York[6], Carolina[2 8], Colorado[10], Texas[8 9], E. Florida[6].—Mexico[7 9 10].—Cuba[10].

Prof. Uhler records that this wide-ranging species has been captured on some of the high mountains of North Carolina at an elevation of more than 6000 feet above sea-level.

2. **Mormidea collaris.** (Tab. V. fig. 9.)

Mormidea collaris, Dall. List Hem. i. p. 211. 3[1]; Stål, En. Hem. ii. p. 19. 2[2].

Hab. Mexico[1 2] (*Mus. Berol.*); Guatemala, San Gerónimo (*Champion*); Costa Rica (*v. Patten*).—Colombia[2].

This species varies in either having the lateral angles of the pronotum acutely spinous, or obsoletely rounded, both forms having been received from Guatemala, and both being contained in the Berlin Museum from Mexico.

3. **Mormidea ypsilon.**

Cimex ypsilon, Linn. Syst. Nat. ed. 12, i. 2, p. 720. 32; Fabr. Syst. Ent. p. 703. 34; Geoze, Ent. Beitr. ii. p. 194. 32; Fabr. Spec. ii. p. 346. 49; Mant. ii. p. 285. 57; Gmel. Syst. Nat. i. 4, p. 2138. 32; Fabr. Ent. Syst. iv. p. 98. 72; Syst. Rhynch. p. 159. 21[1]; Zigny, Hist. ed. 2, iv. p. 269; H.-S. Wanz. Ins. iv. p. 20, f. 368[2].

Cimex ypsilon-æneus, De Geer, Mém. iii. p. 332. 6, t. 34. f. 7 et 8[3].

Pentatoma ypsilon, St. F. et S. Enc. x. p. 56. 16; H.-S. Wanz. Ins. vii. p. 95.

Mormidea ypsilon, A. et S. Hist. des Hém. p. 135. 1[4]; Dall. List Hem. i. p. 211. 1[5]; Stål, Hem. Fabr. i. p. 27. 2; En. Hem. ii. p. 19. 3[6]; Berg, Hem. Argent. p. 37. 1[7].

Stoll, Pun. f. 217 et 220.

Var. **Mormidea inermis.** (Tab. VI. fig. 7.)

Mormidea inermis, Dall. List Hem. i. p. 211. 2[8]; Stål, En. Hem. ii. p. 21. 20.

Hab. Mexico (*Mus. Berol.*); Honduras[8]; Panama (*coll. Dist.*).—Colombia[6]; Guiana, Surinam[1]; Brazil[2 4 6], Para[5], Minas Geraës[6], Rio Janeiro[6], Argentine Republic[7].

The *M. inermis*, Dall., is but the varietal form common to the genus, in which the pronotal angles are non-spinous.

4. **Mormidea angustata.** (Tab. V. fig. 10.)

Mormidea angustata, Stål, Stett. ent. Zeit. xxiii. p. 102. 69[1]; En. Hem. ii. p. 20. 6.

Hab. Mexico[1] (*coll. Signoret*).

5. **Mormidea pictiventris.** (Tab. V. fig. 11.)

Mormidea pictiventris, Stål, Stett. ent. Zeit. xxiii. p. 103. 72[1]; En. Hem. ii. p. 20. 7[2].

Hab. Mexico[1 2] (*Mus. Berol.* et *coll. Signoret*); Guatemala, San Gerónimo (*Champion*); Nicaragua, Chontales (*coll. Dist.*).—Colombia[2]; Cuba[2].

In the Berlin Museum are two varieties of this species in which the luteous markings above are very faint and obscure.

6. **Mormidea lævigata,** n. sp. (Tab. VII. fig. 3.)

Above bronzy, shining, somewhat coarsely punctate. Pronotum with the lateral margins, an arcuated narrow transverse fascia between lateral angles, a large ⅄-shaped mark on anterior margin; scutellum with a central basal spot, and lateral and apical margins, corium with a discal spot situated about one third from apex, levigate luteous. The fore part of the pronotum in front of the transverse fascia is also sparingly levigate and luteous.

Underside of the body luteous; sternum, excepting lateral margins, which are levigate, strongly punctured with bronzy green; abdomen with a broad submarginal border of dark punctures, and a central castaneous fascia, narrowing to apex, and containing three luteous spots, segmentally divided; legs croceus, antennæ fuscous, with the first and second joints luteous.

Long. 6 millims.

Hab. Mexico (*Mus. Berol.*).

Allied to *M. croceipes*, H.-S., but differs by the levigate surface-markings, anterior portion of thorax and head distinctly and strongly deflexed, lateral margins of pronotum straight, lateral angles neither rounded nor prominent.

7. **Mormidea notulata.** (Tab. V. fig. 12.)

Pentatoma notulatum, Herrich-Schäffer, Wanz. Ins. vii. p. 100. f. 765[1].

Mormidea notulata, Dall. List Hem. i. p. 213. 7[2]; Stål, En. Hem. ii. p. 20. 11[3]; Walk. Cat. Het. ii. p. 253. 5[4].

Rhaphigaster discoideus, Dall. List Hem. i. p. 290. 47[5].

Mormidea discoidea, Walk. Cat. Het. ii. p. 255. 23; Stal, En. Hem. ii. p. 20. 12[6].

Hab. Mexico[1 2 3 4 6] (*Mus. Berol.*, *coll. Sign.*), Mirador (*Bilimek*; *Mus. Vind. Cæs.*), Oaxaca[4] (*Mus. Berol.*); Guatemala (*Salvin & Godman*), San Gerónimo (*Champion*); Costa Rica, Cache (*Rogers*).

This species not only conforms to the generic varietal character of differentiation in the produced lateral pronotal angles, but also varies in the colour of the second joint

of the antennæ, which in typical specimens of *M. notulata* is black, whilst in the form described as *M. discoidea*, Dallas, it is luteous or testaceous. This last character, taken in conjunction with the less produced and rounded pronotal angles, induced Stål to consider the two forms as distinct species; but from an examination of a very large series of specimens I have found this to be also only a varietal character—forms with acutely produced pronotal angles, as in the specimen here figured, having in some cases the second joint luteous, whilst in those agreeing with the form described by Dallas the second joint is frequently black.

8. **Mormidea hamulata.**

Mormidea hamulata, Stål, Rio. Hem. i. p. 21. 5[1]; Stett. ent. Zeit. xxiii. p. 104. 74[2]; En. Hem. ii. p. 21. 13[3].

Hab. MEXICO [2].—COLOMBIA [3]; BRAZIL, Rio Janeiro [1].

9. **Mormidea tetra.** (Tab. VI. fig. 6.)

Mormidea tetra, Walk. Cat. Het. iii. p. 551[1].
Mormidea grisescens, Stål, En. Hem. ii. p. 21. 19[2].
Pentatoma ignobilis in MS. (Mus. Berol.).

Hab. MEXICO [2] (*Mus. Berol.*), Oaxaca [1].

The figure is from the type in the British Museum, with which I have had an opportunity of comparing a specimen of Stål's species, kindly forwarded from the Stockholm Museum.

ŒBALUS.

Œbalus, Stål, Stett. ent. Zeit. xxiii. p. 102 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 527.

This genus is principally separable from the preceding by the length of the first joint of the rostrum, which is much shorter than in *Mormidea*, and does not reach the base of the head. It is not essentially tropical in its habitat, being found in the Nearctic as well as in the Neotropical Region. Its closest ally in the Old World would appear to be the Ethiopian genus *Durmia*.

1. **Œbalus pugnax.**

Cimex pugnax, Fabr. Syst. Ent. p. 704. 41; Goeze, Ent. Beitr. ii. p. 238. 10; Fabr. Spec. ii. p. 348. 57 (1781); Mant. ii. p. 285. 66; Gmel. Syst. Nat. i. 4, p. 2140. 211; Fabr. Ent. Syst. iv. p. 100. 83; Syst. Rhynch. p. 161. 32.
Cimex typhœus, Fabr. Syst. Rhynch. p. 162. 34[1].
Petatoma orthacantha, Palis. Beauv. Ins. p. 130, Hém. t. 9. f. 9.
Cimex typhœus, Wolff, Ic. Cim. v. p. 180, fig. 174.
Pentatoma augur, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 313. 2.
Cimex vitripennis, Burm. Handb. ii. 1, p. 367. 9.
Mormidea typhœus, Dall. List Hem. i. p. 216. 16[2], excl. syn. *H. schæfferi* (Stål).

Pentatoma (*Mormidea*) *typhoeus*, Guér. in Sagra, Hist. de Cuba, Ins. p. 370[3].
Oebalus typhoeus, Stål, Hem. Fabr. i. p. 27. 1; Townend Glover, Ills. Ins. Ord. Hem. t. 11. fig. 7.
Oebalus pugnax, Stål, En. Hem. ii. p. 22. 1[4]; Uhler, Bull. U.S. Geol. & Geogr. Surv. ii. p. 285[5]; Proc. Bost. Soc. Nat. Hist. vol. xix. p. 377[6].

Hab. North America[2 4], Pennsylvania[6], Maryland[6], Virginia[6], Carolina[1 4 6], Texas[4 5], Arizona[5].—Mexico[4 5]; Honduras[2]; Guatemala, San Gerónimo (*Champion*).—Cuba[3 5]; Jamaica[2]; Colombia[4 5].

Prof. Uhler states that this species "occurs at considerable altitudes on the Black Mountains of North Carolina, and is not unfrequent upon grassy and shrubby spots in Georgia and Florida." "It appears to lay eggs in late spring and towards the latter end of summer." "The Cuban form is usually larger, and has the lateral angles longer and more slender than in those from the United States."

SIBARIA.

Sibaria, Stål, En. Hem. ii. p. 23 (1872).

Stål thus differentiates the above:—"Hoc genus ad *Mormideam* appropinquat, sed differt capite antrorsum magis angustato, oculis majoribus, femoribus spinosis, tibiis distincte sulcatis, corii margine exteriore basi haud calloso; ab *Euchisto* et affinibus differt marginibus lateralibus thoracis obtusissimis, transversim rugosis." *Sibaria* at present includes but one species.

1. **Sibaria armata.** (Tab. V. fig. 17.)

Mormidea armata, Dall. List Hem. i. p. 215. 14[1]; Stål, En. Hem. ii. p. 23. 1[2].

Hab. Guatemala, La Tinta, Vera Paz (*Champion*).—Colombia[2]; Brazil[1 2].

A Guatemalan specimen is figured.

GALEDANTA.

Galedanta, Amyot et Serville, Hist. des Hém. p. 136 (1843); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 527.

Only two species of *Galedanta* are at present recorded, both belonging to the Neotropical Region. It has considerable affinity with the following genus, *Euschistus*; but the lateral lobes of the head are longer than the central, and the scutellum possesses a tuberculous callosity in each basal angle.

1. **Galedanta myops.** (Tab. V. fig. 13.)

Cimex myops, Fabr. Syst. Rhynch. p. 155. 1.
Galedanta myops, Stål, Hem. Fabr. i. p. 26. 1; En. Hem. ii. p. 23. 1[1].

Hab. Costa Rica, Cache (*Rogers*).—Colombia (*coll. Dist.*); Guiana[1].

EUSCHISTUS.

Euschistus, Dallas, List Hem. i. pp. 193 & 201 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 528.
Lycipta, Stål, Rio. Hem. ii. p. 58 (1862).

About forty species are at present enumerated as belonging to this genus. Its range is the Nearctic and Neotropical Regions; and it exists under very different climatic conditions. The apex of the head is rounded or emarginate, the central lobe sometimes a little longer or a little shorter than the lateral lobes; the tibiæ are sulcated; the lateral angles of the pronotum are prominent, sometimes acute and spinous, and sometimes rounded as seen in some variable species; the anterior lateral pronotal margins are generally denticulated or crenulated: and this peculiarity was originally one of its distinctive characters; but recently Stål described a species which has the lateral margins of the pronotum smooth, thus reducing the value of this portion of the diagnosis, and making it of sectional value only.

A. *Anterior lateral borders of the pronotum denticulated or crenulated.*

1. **Euschistus verrucifer.** (Tab. V. fig. 14.)

Padæus verrucifer, Stål, Stett. ent. Zeit. xxiii. p. 101. 64[1].
Euschistus verrucifer, Stål, En. Hem. ii. p. 24. 7[2].

Hab. Mexico [1 2].

The specimen figured is in the collection of Dr. Signoret.

2. **Euschistus tristigmus.** (Tab. V. figg. 20 & 21.)

Pentatoma tristigma, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 314. 4; H.-S. Wanz. Ins. vii. pp. 95 & 101, fig. 767[1].
Cimex pyrrhocerus, H.-S. Wanz. Ins. vi. p. 71, fig. 638[2].
Euschistus luridus, Dall. List Hem. i. p. 207. 17, t. 7. fig. 6[3]; Glover, Ill. Ins. Ord. Hem. t. 11. fig. 13.
Euschistus tristigma, Dall. List Hem. i. p. 207. 18; Glover, Ill. Ins. Ord. Hem. t. ix. fig. 24.
Euschistus tristigmus, Stål, En. Hem. ii. p. 26. 20[4]; Uhler, Bull. U.S. Geol. & Geogr. Surv. vol. ii. p. 286. 4[5].

Hab. North America [1 2 3 4 5].—Mexico (*Sichel, Mus. Vind. Cæs.*), Oaxaca (*Mus. Berol.*); Guatemala, Capetillo, Dueñas, San Gerónimo (*Champion*).

The late Prof. Stål first grouped these divergent forms together as constituting one species. This view was afterwards accepted by Prof. Uhler, who studied the varieties on the spot, and who remarks:—"No species thus far discovered in this country (North America) exhibits such a wide range of differences in the form of the pronotum. The form most common in Maryland has acute and acuminate lateral angles, but longer than in others from Pennsylvania, Virginia, Louisiana, and some other parts of the South.

The large specimens with bluntly rounded angles have not yet been collected by me in company with the other form." These, agreeing with the *E. luridus*, Dall. (the form we have figured, with a black-coloured variety), have hitherto been received only from Guatemala; but the Berlin Museum contains both forms from Mexico. Prof. Uhler also states that in North America "it sometimes occurs in large numbers in late summer on bushes in damp situations." "A whitish bloom often covers the mature specimens in this region." This is also observable in the individuals of this species received from Guatemala.

3. **Euschistus rugifer.** (Tab. VI. figg. 8 & 9.)

Euschistus rugifer, Stål, En. Hem. ii. p. 26. 24[1].

Hab. Mexico [1].

The specimens figured are typical, and are in the collection of the Stockholm Museum. The species appears to be most variable in size.

4. **Euschistus bifibulus.**

Pentatoma bifibula, Palis. de Beauv. Ins. p. 148, Hém. pl. 10. fig. 5[1].

Euschistus pallipes, Dall. List Hem. i. p. 204. 8[2].

Euschistus bifibula, Dall. List Hem. i. p. 204. 9[3]; Stål, En. Hem. ii. p. 27. 25[4]; Stett. ent. Zeit. xxiii. p. 100. 58[5].

Hab. Mexico [4 5] (*coll. Signoret*), Oaxaca (*coll. Dist.*); Honduras [3 4]; Guatemala, San Gerónimo (*Champion*); Costa Rica (*Van Patten*).—Cuba [4]; San Domingo [1]; Jamaica [2]; Colombia [4].

5. **Euschistus crenator.**

Cimex crenator, Fabr. Ent. Syst. iv. p. 101. 87; Syst. Rhynch. p. 162. 38.

Pentatoma obscura, Palis. Beauv. Ins. p. 149, Hém. pl. 10. figg. 7 & 9.

Pentatoma pustulata, Palis. Beauv. Ins. p. 185, Hém. pl. 11. fig. 2.

Euschistus obscurus, Dall. List Hem. i. p. 208. 19[1]; Stål, Stett. ent. Zeit. xxiii. p. 100. 59[2].

Pentatoma (*Mormidea*) *obscura*, Guér. in Sagra, Hist. de Cuba, Ins. p. 366[3].

Pentatoma (*Mormidea*) *pustulata*, Guér. in Sagra, Hist. de Cuba, Ins. p. 368[4].

Euschistus crenator, Stål, Hem. Fabr. i. p. 26. 2; En. Hem. ii. p. 27. 26[5]; Uhler, Bull. U.S. Geol. & Geogr. Surv. ii. p. 286. 5[6].

Hab. North America [6], Texas [5 6], Florida [5 6].—Mexico [2 5 6] (*Mus. Berol.*); Central America [1]; Costa Rica (*Van Patten*), Irazu (*Rogers*), Panama (*coll. Dist.*), Matachin (*Thiene, coll. Oberthür*).—Cuba [3 4 6]; Colombia [5].

6. **Euchistus spurculus.** (Tab. VI. fig. 10.)

Euschistus (*Lycipta*) *spurculus*, Stål, Stett. ent. Zeit. xxiii. p. 100. 58[1]; En. Hem. ii. p. 28. 30[2].

Hab. Mexico [1 2]; Guatemala, Zapote (*Champion*).

The specimen figured is from Guatemala. I have not seen typical forms of this species, but have found so many strong resemblances to Stål's description, that I have not hesitated to identify it with the same.

7. **Euschistus comptus.** (Tab. VI. fig. 11.)

Euschistus comptus, Walk. Cat. Het. iii. p. 550[1]; Stål, En. Hem. ii. p. 28. 31[2].

Hab. Mexico[2], Oaxaca; Guatemala, San Gerónimo (*Champion*).

Stål identified his specimens, with doubt, as the above; but having had an opportunity of comparing one of them from the Stockholm Museum with Walker's type, I have found both to be strictly identical. The specimen figured is in the Stockholm Museum.

8. **Euschistus lineatus.** (Tab. VI. fig. 12.)

Euschistus lineatus, Walk. Cat. Het. ii. p. 245. 14[1].

Hab. Mexico, Vera Cruz[1].

The figure is from the type in the British Museum.

9. **Euschistus strenuus.** (Tab. V. fig. 16.)

Euschistus strenuus, Stål, Stett. ent. Zeit. xxiii. p. 100. 62[1]; En. Hem. ii. p. 28. 40.

Hab. Mexico[1] (*Bilimek, Mus. Vind. Cæs.*).

The type, figured, is now in the collection of Dr. Signoret.

10. **Euschistus biformis.** (Tab. V. fig. 15.)

Euschistus biformis, Stål, Stett. ent. Zeit. xxiii. p. 100. 61[1]; En. Hem. ii. p. 28. 32[2].

Hab. Mexico[1 2]; Guatemala, San Gerónimo (*Champion*); Costa Rica, Irazu (*Rogers*).

I possess a black variety of this species, which some time since I communicated to the late Prof. Stål. He had seen no such variety before, and remarked, with truth, "There exists probably no black species of *Euschistus*, as in general typically black *Pentatomæ* are very scarce." I have figured here a similar variety of *Euschistus tristigmus*.

B. *Anterior lateral borders of pronotum not denticulated or crenulated.*

11. **Euschistus integer.** (Tab. VII. fig. 5.)

Euschistus integer, Stål, En. Hem. ii. p. 28. 33[1].

Hab. Mexico[1].

The figure is from the type in the Stockholm Museum, kindly made and transmitted to me by Prof. Lindström.

BERECYNTHUS.

Berecynthus, Stål, Stett. ent. Zeit. xxiii. p. 101 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 527.

The head has the central lobe generally much produced and prominent—a character, however, which appears to be variable, and will not bear the value which has hitherto been ascribed to it in generic diagnoses. The antenniferous tubercles are strongly spinous externally.

One species only is known, which is common to Tropical America.

1. **Berecynthus delirator,** var. (Tab. VI. fig. 14.)

Cimex delirator, Fabr. Ent. Syst. iv. p. 103. 92; Syst. Rhynch. p. 164. 45.
Cimex hastator, Fabr. Ent. Syst. Suppl. p. 522. 92, 93; Syst. Rhynch. p. 164. 46 [1].
Prooxys crenatus, A. & S. Hist. des Hém. p. 140. 3 [2].
Pentatoma spiniceps, H.-S. Wanz. Ins. vii. p. 106, fig. 772.
Proxys hastator, Dall. List Hem. i. p. 210. 2 [3].
Proxys spiniceps, Dall. List Hem. i. p. 210. 4.
Berecynthus delirator, Stål, Hem. Fabr. i. p. 26. 1; En. Hem. ii. p. 28. 1 [4].
Proxys rhododactylus, Voll. Versl. Ak. Amst. Nat. ser. 2, ii. p. 180 [5].

Hab. MEXICO [4], Minas Viejas (*Dr. Palmer*); PANAMA (*coll. Dist.*), Matachin (*Schunke, coll. Oberthür*).—COLOMBIA [4]; VENEZUELA [4], Caracas [5]; GUIANA [3], Demerara (*coll. Dist.*), Surinam [4], Cayenne [1 2].

The specimen figured is a variety from Mexico, in which the central lobe of the head is barely prominent. Taken alone it would have been considered a distinct species; but I fortunately possessed a series of specimens from Panama, which exhibited all gradations of this character, from typical forms to some in which the central lobe was almost as much abbreviated as in this Mexican specimen.

PADÆUS.

Padæus, Stål, Stett. ent. Zeit. xxiii. p. 101 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 528.

This genus has many affinities with *Euschistus*; the margins of the pronotum are not denticulated; and the anterior tibiæ only are sulcated. Two species are recorded as belonging to *Padæus*, both from Central America.

1. **Padæus irroratus.**

Cimex irroratus ♀, Herrich-Schäffer, Wanz. Ins. iv. p. 19. fig. 367 [1].
Pentatoma irroratum, H.-S. Wanz. Ins. vii. p. 94.
Mormidea irrorata, Dall. List Hem. i. p. 215. 15 [2].
Padæus irroratus, Stål, Stett. ent. Zeit. xxiii. p. 101. 63 [3]; En. Hem. ii. p. 29. 1 [4].
Mormidea vidua, Voll. Versl. Ak. Amst. Nat. ser. 2, ii. p. 180. 26 [5].

Hab. Mexico [1 2 3 4]; Guatemala [5], Capetillo, Calderas, Purula (*Champion*); Costa Rica (*Van Patten*), Irazu, R. Sucio (*Rogers*).

2. **Padæus trivittatus.** (Tab. VI. fig. 16.)

Cimex irroratus ♂, Herrich-Schäffer, Wanz. Ins. iv. p. 20 [1].
Padæus trivittatus, Stål, En. Hem. ii. p. 29. 2 [2].

Hab. Mexico [1 2] (*Mus. Berol.*, *Mus. Vind. Cæs.*); Guatemala, Calderas (*Champion*).

This is very closely allied to the preceding species. Stål gives nothing more than colour-*differentia*, which, though great and apparently constant, leaves still much doubt as to their real specific divergence.

PROXYS.

Proxys, Spinola, Ess. Hém. p. 325 (1837); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 527.
Prooxys, A. & S. Hist. des Hém. p. 139 (1843).

The head is much elongated and the central lobe acutely prominent; the lateral pronotal angles are strongly and acutely produced; and the body is obovate and lengthened. Four species (all Neotropical forms) are enumerated, of which three have been already received from Central America: as pointed out by Stål, they are easily separable, apart from other characters, by the colour of the legs.

Legs pale luteous, generally spotted with black.

Femora and tibiæ concolorous	*P. albo-punctulatus.*
Posterior femora with apices black	*P. victor.*
Femora and tibiæ with apices black	*P. punctulatus.*

1. **Proxys albo-punctulatus.**

Pentatoma albo-punctulata, Palis. Beauv. Ins. p. 130, Hém. pl. 9. fig. 8.
Cimex victor, H.-S. Wanz. Ins. iv. p. 21, fig. 369 [1].
Pentatoma victor, H.-S. Wanz. Ins. vii. p. 94.
Proxys albo-punctulatus, Stål, En. Hem. ii. p. 29. 1 [2].
Stoll, Pun. figs. 159 & 230.

Hab. Panama (*coll. Dist.*).—Brazil [1 2], Rio Janeiro [2], Bahia [2].

2. **Proxys victor.** (Tab. V. fig. 18.)

Cimex victor, Fabr. Syst. Ent. p. 705. 45; Goeze, Ent. Beitr. ii. p. 239. 14; Fabr. Spec. ii. p. 348. 62; Mant. ii. p. 285. 71; Gmel. Syst. Nat. i. 4, p. 2140. 216; Fabr. Ent. Syst. iv. p. 103. 91; Syst. Rhynch. p. 164. 44.
Proxys victor, Stal, Hem. Fabr. i. p. 25. 1; En. Hem. ii. p. 29. 2 [1]; Dall. List Hem. i. p. 210. 1 (excl. syn.).

Hab. Mexico, Oaxaca (*Mus. Berol.*); Nicaragua, Chontales (*coll. Dist.*); Panama (*coll. Dist.*).—Colombia [1]; Trinidad (*coll. Dist.*).

Mr. Townend Glover (Ill. Ins. Ord. Hem. pl. iv. fig. 16) gives a figure which he describes as *Proxys victor*; the colour of the legs, however, would more apply to *P. albo-punctulatus*.

3. **Proxys punctulatus.**

Halys? punctulata, Palis. Beauv. Ins. p. 188, Hém. pl. 11. fig. 9.
Cimex victor, Wolff, Ic. v. p. 181, fig. 175.
Pentatoma tenebrosa, Say, New Harm. Ind. Jan. 1832; Compl. Writ. i. p. 304. 2.
Prooxys victor, A. & S. Hist. des Hém. p. 140. 1 (excl. syn.)[1].
Prooxys delirator, A. & S. Hist. des Hém. p. 140. 2, pl. 3. fig. 7 (excl. syn.)[2].
Pentatoma (Prooxys) punctulata, Guér. in Sagra, Hist. de Cuba, Ins. p. 370[3].
Prooxys brevispinus, Guér. in Sagra, Hist. de Cuba, Ins. p. 371[4].
Proxys geniculatus, Stål, Stett. ent. Zeit. xxiii. p. 102. 67[5].
Proxys punctulatus, En. Hem. ii. p. 29. 4[6]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 286[7].
Proxys tenebrosa, Town. Glover, Ill. Ins. Ord. Hem. p. 62, pl. 8. f. 28.

Hab. North America, near Philadelphia[7], Indian Territory[7], Louisiana[7], Georgia[7], Texas[6 7], Florida[7].—Mexico[5 6 7]; Guatemala, San Gerónimo (*Champion*); Nicaragua, Chontales (*Janson*).—Cuba[3 4 6 7]; St. Domingo[1 2]; Cayenne[1].

HYMENARCYS.

Hymenarcys, Amyot & Serville, Hist. des Hém. p. 124 (1843); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 526.

This must be considered a Nearctic genus. Three species are known, two of which are widely distributed in North America, while the third, as yet, has only been received from Mexico.

The pronotum is unarmed; the scutellum moderately broad at the apex, and not reaching apex of the corium; the nervures of the membrane are irregularly reticulated; and the rostrum about reaches the intermediate coxæ.

1. **Hymenarcys reticulata.** (Tab. VI. fig. 17.)

Hymenarcys reticulata, Stål, En. Hem. ii. p. 30. 2[1].

Hab. Mexico (*Bilimek, Mus. Vind. Cæs.*), Oaxaca[1].

The figure is from a typical specimen in the Stockholm Museum.

CHLOROCHROA.

Lioderma, Uhler, Proc. Bost. Soc. Nat. Hist. Feb. 1871; ibid. vol. xix. p. 377 (1878) (nec Marseul).
Lioderma, subgen. *Chlorochroa*, Stål, En. Hem. p. 33 (1872).

Stål has divided this genus into three subgenera; it is, however, preferred here to use them only as sections. About six species are described, which are purely Nearctic forms, with the exception of two, one of which is known at present from Mexico only.

The scutellum is somewhat long, triangular, and narrowed at the apex; pronotum deflexed anteriorly, membrane with longitudinal nervures. These are merely superficial characters, given here to separate it from the preceding and following genera, some closely-allied ones not being found in the Central-American fauna.

1. **Chlorochroa ligata.**

Pentatoma ligata, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 315. 6; Fitch, Third Rep. p. 71. 100[1].

Cimex rufo-cinctus, H.-S. Wanz. Ins. iv. p. 94, f. 436[2].

Pentatoma marginalis, Walk. Cat. Het. ii. p. 288. 34[3].

Lioderma (*Chlorochroa*) *ligata*, Stål, En. Hem. ii. p. 33. 4[4].

Chlorochroa ligata, Town. Glover, Ill. Ins. Ord. Hem. p. 30, pl. iv. f. 23.

Hab. North America[1 3].—Mexico[2 3 4] (*Sallé*) (*Mus. Berol.*), Puebla (*Bilimek*, *Mus. Vind. Cæs.*).

According to Mr. Fitch, this insect punctures the leaves and sucks the sap of hemlock and grape.

2. **Chlorochroa uhleri.** (*Lioderma uhleri*, Tab. VI. fig. 18.)

Lioderma (*Chlorochroa*) *uhleri*, Stål, En. Hem. ii. p. 33. 5[1].

Hab. Mexico[1] (*Bilimek*, *Mus. Vind. Cæs.*).

The specimen figured is typical, in the collection of the Stockholm Museum.

TRICHOPEPLA.

Trichopepla, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 528.

Two species are described, both Nearctic forms; one is here included in this fauna.

The rostrum extends to the posterior coxæ; the antennæ are short, the first joint not reaching the apex of the head. Pronotum convex, deflexed anteriorly; lateral margins slightly reflexed. The body is pilose; and, as Uhler truly remarks (Proc. Bost. Soc. Nat. Hist. vol. xix. p. 374), "it is the nearest North-American representative of the African genus *Agonoscelis*."

1. **Trichopepla semivittata.** (Tab. VI. fig. 15.)

Pentatoma semivittata, Say, New. Harm. Ind. Dec. 1831; Compl. Writ. i. p. 322. 21.

Pentatoma semivittatum, H.-S. Wanz. Ins. vii. p. 93 et 101, f. 766[1].

Pentatoma pilipes, Dall. List Hem. i. p. 247. 37[2].

Trichopepla semivittata, Stål, En. Hem. ii. p. 34. 1[3]; Uhler, Proc. Bost. Soc. Nat. Hist. vol. xix. p. 374[4]; Bull. U.S. Geol. & Geog. Surv. ii. p. 289[5]; Town. Glover, Ill. Ins. Ord. Hem. p. 72, pl. ii. f. 3.

Hab. NORTH AMERICA, Pennsylvania [1], New Jersey [3], North Carolina [4], Texas [3 5], East Florida [2], whole Atlantic region [5].—MEXICO (*coll. Sign.*).

In Herrich-Schäffer's figure the lateral pronotal borders are apparently too much sinuated. Townend Glover's figure is too faint and obscure for any practical purpose. Dr. Signoret informs me that he has received this species from North America under the apparently unpublished name of *T. kirbyi*, Fitch.

PERIBALUS.

Peribalus, Mulsant et Rey, Pun. France, pp. 237, 262 (1866); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 529, 1872, p. 37.

Dryocoris, Mulsant et Rey, Pun. France, pp. 237, 267 (1866).

This genus is common to both the Palæarctic and Nearctic regions, one species being recorded from Mexico.

It is easily separated from the preceding genus by the absence of pilosity, and the broader head (which is rounded in front), &c. The other characters, more special and minute, cannot be detailed comparatively here, except by a conspectus of the whole of the allied genera, which is undesirable in this portion of the work.

1. **Peribalus limbolarius.** (Tab. VI. fig. 19.)

Peribalus limbolarius, Stål, En. Hem. ii. p. 34. 1[1]; Uhler, Bull. U.S. Geol. & Geogr. Surv. iii. p. 403[2].

Peribalus modestus, Uhler, U.S. Geol. Surv. Montana, pt. iv. Zool. & Bot. p. 396[3]; Bull. U.S. Geol. & Geog. Surv. ii. p. 289[4].

Hab. NORTH AMERICA, New York [1], Illinois [1], Texas [1 4], Kansas [3], Arizona [3 4], Colorado [2 3 4], California [4].—MEXICO [1].

The specimen figured is from Mexico, and in the collection of the Stockholm Museum. Prof. Uhler found this insect rather common, in the nymph stage, upon several kinds of flowering plants in August. He describes it as varying "in the amount of black upon the two last joints of the antennæ, in the presence, or not, of black upon the acetabular caps, and in the blackish reticulation upon the corium."

THYANTA.

Thyanta, Stål, Rio Hem. ii. p. 58 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 529.

This genus is confined to the Nearctic and Neotropical regions. It is represented in the Antilles, and is found as far north as New York, and as far south as Chili and Buenos Ayres. By Stål it is chiefly distinguished from the preceding genus by the relative length of the lobes of the head, "jugis et tylo æque longis vel hoc illis paullo longiore."

1. **Thyanta perditor.**

Cimex perditor, Fabr. Ent. Syst. iv. p. 102. 90; Syst. Rhynch. p. 163. 42.
Pentatoma fascifera, Pal. Beauv. Ins. p. 150, Hém. t. 10. f. 8[1].
Pentatoma collaris, Hope, Cat. i. p. 40[2].
Cimex transversalis, H.-S. Wanz. Ins. vi. p. 66 (nec f. 630).
Cimex dimidiatus, H.-S. Wanz. Ins. vi. f. 629.
Pentatoma dimidiatum, H.-S. Wanz. Ins. vii. p. 94.
Euschistus perditor, Dall. List Hem. i. p. 206. 12[3].
Pentatoma (*Mormidea*) *perditor*, Guér. in Sagra's Hist. de Cuba, Ins. p. 367[4].
Euschistus rubiginosus, Dall. List Hem. i. p. 206. 13[5]; Stål, En. Hem. ii. p. 28. 36.
Euschistus fasciatus, Walk. Cat. Het. ii. p. 245. 12[6].
Euschistus adjunctor, Walk. Cat. Het. ii. p. 249. 39[7].
Thyanta perditor, Stål, Hem. Fabr. i. p. 29. 1; En. Hem. ii. p. 34. 1[8]; Uhler, U.S. Geol. Surv. Montana, pt. iv. Zool. & Bot. p. 399. 1; Bull. U.S. Geol. & Geogr. Surv. ii. p. 289. 1[9]; iii. p. 404. 3[10].

Hab. North America, Nebraska[9], Colorado[9 10], Texas[8 9], Arizona[9].—Mexico[8 9] (*Bilimek*, *Mus. Vind. Cæs.*), Oaxaca[6] (*Mus. Berol.*); British Honduras, Belize[7]; Guatemala, Dueñas, Capetillo, San Gerónimo, Guatemala city (*Champion*); Costa Rica (*Van Patten*), Caché (*Rogers*).—Antilles, Cuba[4], St. Domingo[1], St. Vincent[2]; Colombia[3 8]; Brazil[5].

Prof. Uhler states that in Western Hayti this species occurs abundantly in the neglected and weedy parts of gardens, and that he also obtained a few specimens in that country from the Palma Christi, or castor-oil plant. He also remarks that "the most typical form of this species inhabits the West Indies and Mexico; those with the humeral angles shortest are found in Nebraska." All the Central-American specimens which I have examined have the humeral angles well developed and the red thoracic fascia prominent.

2. **Thyanta tæniola.** (Tab. VII. fig. 4.)

Pentatoma tæniola, Dall. List Hem. i. p. 250. 44[1].
Thyanta tæniola, Stål, En. Hem. ii. p. 35. 6[2].

Hab. North America, California[2].—Central America[1]; Guatemala, near the city (*Salvin*).—Antilles[2].

The specimen figured is from Guatemala. Stål gives "Puna" as one of the localities of this insect, meaning, I suppose, the island of Puna off the coast of Ecuador.

3. **Thyanta casta.** (Tab. V. fig. 19.)

Thyanta casta, Stål, Stett. ent. Zeit. xxiii. p. 104. 76[1]; En. Hem. ii. p. 35. 9.

Hab. Mexico[1].

The typical specimen figured is in the collection of Dr. Signoret.

CHLOROCORIS.

Chlorocoris, Spinola, Ess. Hém. p. 288 (1837); Dallas, List Hem. i. p. 151 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 525; En. Hem. ii. p. 37, note (1872).
Thelima, Amyot et Serville, Hist. des Hém. p. 107 (1843).

In this genus the lateral lobes of the head are longer than the central, the lateral margins of the pronotum are denticulated or crenulated, and the lateral angles distinctly and acutely produced, the body is always more or less flattened or depressed, and the abdomen beneath is longitudinally and centrally sulcated. This last character, however, is a somewhat uncertain one; for since Dallas on this structural character placed the genus in his family Halydidæ, and Stål, who correctly placed it immediately preceding the genus *Loxa*, yet still relied upon the sulcated abdomen as a strong differential character in his 'Conspectus Generum,' species have been discovered in which this ventral furrow is very obscure and confined to the base of the abdomen only, thus approaching closely the following genus. The apexes of the femora are unarmed. *Chlorocoris* is a truly Neotropical genus; and it apparently has its headquarters in Central America.

A. *Head long, triangular; lateral lobes much produced and subacute.*

1. Chlorocoris complanatus.

Pentatoma complanata, Guér. Voy. Coq. Ins. p. 167, Hém. t. 2. f. 13.
Chlorocoris tau, Spin. Ess. Hém. p. 289[1]; H.-S. Wanz. Ins. vii. p. 49[2].
Cimex deplanatus, H.-S. Wanz. Ins. vi. p. 68, f. 633[3].
Thelima complanata, A. & S. Hist. des Hém. p. 107. 1[4].
Chlorocoris complanatus, Dall. List Hem. i. p. 167. 1[5]; Stål, En. Hem. ii. p. 35. 2[6].

Hab. GUATEMALA, San Gerónimo (*Champion*).—BRAZIL [1 2 3 5 6], St. Catherina[4], Rio Janeiro[6] (*coll. Dist.*).

2. Chlorocoris atrispinus. (Tab. V. fig. 22.)

Chlorocoris atrispinus, Stål, Stett. ent. Zeit. xxiii. p. 99. 56[1]; En. Hem. ii. p. 35. 3[2].

Hab. MEXICO [1 2] (*coll. Sign.*); NICARAGUA, Chontales (*Janson*); COSTA RICA, Caché (*Rogers*).—COLOMBIA, Sierra Nevada of Santa Marta (*Simons, coll. Dist.*).

This species varies in sometimes having the lateral denticulated margins of the pronotum and basal margins of the corium sanguineous: this is particularly observable in two Nicaraguan and one Colombian specimen, the only individuals from these regions which I have as yet seen.

The specimen figured is from Chontales.

3. **Chlorocoris rufispinus.** (Tab. V. fig. 23.)

Chlorocoris rufispinus, Dall. List Hem. i. p. 167. 2[1]; Stål, Stett. ent. Zeit. xxiii. p. 99. 55[2]; En. Hem. ii. p. 35. 4[3].

Chlorocoris distinctus, Sign. Ann. Soc. Ent. Fr. sér. 2, ix. p. 330. 3, t. 10. fig. 2[4]; Stål, En. Hem. ii. p. 36. 7.

Hab. MEXICO [1 2 3 4] (*coll. Sign.*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, San Gerónimo (*Champion*).

Dr. Signoret having kindly lent me a type specimen of his *C. distinctus*, I find it identical with *C. rufispinus*, Dall. Both descriptions were published in 1851. Dr. Signoret's description was communicated to the French Entomological Society at the "séance du 8 Janvier," but was not published until some time afterwards; and therefore, though Dallas's work bears date July 1851, it probably appeared first; and I think that, under the circumstances, the name *rufispinus* should stand, as it is now generally recognized and no law is broken by retaining it.

Stål (En. Hem. *ut suprà*) places this species under a section of the genus which he describes as "antennis minus gracilibus, pictura nigra destitutis." This, however, is incorrect; in all the species we have examined the colour of the antennæ conforms to that of the two preceding species.

The specimen figured is from Guatemala.

B. *Head shorter, subconical; lateral lobes slightly produced, with the apexes rounded.*

4. **Chlorocoris rubescens.** (Tab. VI. fig. 20.)

Chlorocoris rubescens, Walk. Cat. Het. iii. p. 543[1]; Stål, En. Hem. ii. p. 35. 53[2].

Chlorocoris rufopictus, Walk. Cat. Het. iii. p. 544[3].

Hab. Mexico [2 3] (*Mus. Berol.*), Orizaba [1].

The figure is from the type in the British Museum.

5. **Chlorocoris subrugosus.** (Tab. VI. fig. 21.)

Chlorocoris subrugosus, Stål, En. Hem. ii. p. 36. 6[1].

Hab. MEXICO [1] (*Mus. Berol., Mus. Vind. Cæs.*); GUATEMALA, Pancina, Vera Paz (*Champion*).

The colour of the antennæ in this species varies; concolorous in some specimens, in others the apexes of the second, third, fourth, and fifth joints are black, as in other species of the genus. This antennal coloration appears to be of generic character, and its absence more or less of an aberrance.

The specimen figured is a typical one from Mexico, and was kindly lent to me by the authorities of the Stockholm Museum.

6. **Chlorocoris aberrans,** n. sp. (Tab. V. fig. 24.)

Oblong, pale green, thickly punctate and obscurely rugulose. Head transversely striated, lateral lobes a little longer than central, rounded at apexes and slightly cleft; lateral margins narrowly black. Antennæ ochreous, second and third joints subequal in length, remainder wanting. Pronotum with the lateral angles produced moderately upwards and forwards, the apexes and hind margins of the spines black; lateral crenulated margins ochreous. Membrane pale vitreous; connexivum with the segmental incisures black. Underside of body slightly paler in hue; legs luteous; rostrum pale luteous, with the tip pitchy and just passing hind coxæ. Abdomen distinctly and sharply sulcated at base.

Long. 20 millim.; lat. pronot. ang. 11 millim.

Hab. Costa Rica, Irazu (*Rogers*).

The elongated body and short blunt pronotal angles readily differentiate this species from others of the genus. It is most closely allied to *C. subrugosus*, but is distinguished by the different shape of the scutellum.

7. **Chlorocoris championi,** n. sp. (*Loxa championi*, Tab. VI. fig. 23.)

Green, thickly and coarsely punctured. Head with the lateral lobes longer than the central, rounded at the apexes and moderately cleft. Antennæ pale green, with the apical third of the second and third and the apical half of the fourth and fifth joints black; second joint much shorter than third; third, fourth, and fifth joints subequal. Rostrum luteous, with the apex narrowly black and just passing the intermediate coxæ. Pronotum with the lateral angles strongly produced, the spines somewhat directed upwards and pitchy towards apex; lateral crenulated margins dark orange. Scutellum with a small basal central orange spot. Corium with the basal margin dark orange; membrane vitreous, with some obscure pitchy suffusions. Connexivum with the outer margin narrowly dark orange. Body beneath paler, deeply but sparingly punctate.

Long. 17 millim.; lat. pronot. ang. 10 millim.

Hab. Guatemala, Sabo and Pancina, Vera Paz (*Champion*).

The abdomen beneath is only obscurely sulcated towards the base. It is at once separated from the preceding species by the very different shape of the pronotum and the proportionally greater width and lesser length of the same. One specimen, received from Pancina, is much paler and more mottled than examples received from Sabo.

8. **Chlorocoris irroratus,** n. sp. (Tab. VII. fig. 16.)

Pale green, rugulose, mottled and irrorated with luteous. Head somewhat elongate and depressed, the lateral lobes a little longer than the central, and slightly cleft at apex. Antennæ dull greenish, third joint longest, fourth and fifth a little thickened and subequal in length. Pronotum with the lateral angles acutely and sharply produced, luteous, and finely punctured with black; lateral crenulated margins and a somewhat faint central longitudinal line pale orange. Posterior lateral margins of scutellum obscurely luteous. Connexivum luteous, with a small black spot on each segmental incisure. Membrane pale vitreous. Body beneath somewhat paler; rostrum pale green, about reaching posterior coxæ. Abdomen faintly and obscurely sulcated at base.

Long. 16 millim.; lat. pronot. ang. 10 millim.

Hab. Mexico (*Bilimek*; *Mus. Vind. Cæs.*, *Mus. Berol.*).

This species is very distinct, its more convex body and rugulose and irrorated surface being in strong contrast with the common facies of the genus. A second specimen

which I have seen, and which is contained in the Berlin Museum, is somewhat darker in colour throughout.

LOXA.

Loxa, Amyot et Serville, Hist. des Hém. p. 137 (1843); Dall. List Hem. i. p. 193 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 525; En. Hem. ii. p. 37, note (1872).

This genus is closely allied to the last, and is really separated by the apexes of the femora being armed above with a distinct spine; the body is also more convex and less flattened than in *Chlorocoris.* Numerous other minor details have been given; but it is questionable how far these may prove to be constant. *Loxa* is confined to Tropical America; but only about one third of the total species enumerated have as yet been received from Central America. The Amazonian and Colombian subregions appear to be the home of this genus. It is also found in the Antillean subregion.

1. **Loxa flavicollis.**

Cimex flavicollis, Drury, Ill. Nat. Hist. Ins. ii. p. 67, t. 36. f. 4.

Cimex albicollis, Fabr. Spec. ii. p. 347. 51; Mant. ii. p. 285. 59; Gmel. Syst. Nat. i. 4, p. 2138. 202; Fabr. Ent. Syst. iv. p. 98. 75; Syst. Rhynch. p. 160. 26; H.-S. Wanz. Ins. vi. p. 68. f. 634.

Pentatoma viridis, Pal. Beauv. Ins. p. 111, Hém. pl. 8. f. 1[1].

Loxa flavicollis, A. & S. Hist. des Hém. p. 137. 1, pl. 3. f. 3*a*[2]; Dall. List Hem. i. p. 198. 1[3]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 290[4]; Stål, En. Hem. ii. p. 36. 1[5].

Loxa virescens, A. & S. Hist. des Hém. p. 137. 2, pl. 3. f. 3.

Pentatoma albicolle, H.-S. Wanz. Ins. vii. p. 94.

Stoll, Pun. f. 196, 198, et 200.

Hab. North America, Texas[4], New Mexico[4].—Mexico[4]; Guatemala, Cubulco, Vera Paz (*Champion*); Panama (*Boucard*).—Antilles[4], Cuba[5], St. Domingo[1], Jamaica[3]; Guiana, Surinam[5], Cayenne[2]; Brazil[3 5], Rio Janeiro (*coll. Dist.*).

The colour of this species varies from green to ochreous, some species being unicolorous and others combining both the green and ochreous markings.

2. **Loxa affinis.** (Tab. VI. fig. 22.)

Loxa affinis, Dall. List Hem. i. p. 198. 2[1]; Stål, En. Hem. ii. p. 36. 2.

Hab. British Honduras, river Sarstoon (*Blancaneaux*); Guatemala, Zapote (*Champion*); Panama (*Boucard*).—Brazil, Para[1].

This species is closely allied to the preceding; but, besides the differential characters given by Dallas, viz. the greater length of the pronotum and the shorter lateral pronotal angles, the length of the rostrum is also a distinctive mark. In *L. affinis* this

just reaches the apex of the fourth abdominal segment; in *L. flavicollis* it only extends to the middle of the second segment. The colour varies as in *L. flavicollis*.

The specimen figured is from Guatemala.

3. **Loxa variegata,** n. sp. (Tab. V. fig. 25.)

Green, coarsely punctate. Head with the lateral lobes much longer than the central, prominent and acute, lateral lobes longitudinally ridged and furrowed, lateral margins ochreous. Pronotum with the disk rugulose, the lateral angles produced into short acute spines, slightly directed forwards; these spines are ochreous, with the margins black; lateral crenulated margin ochreous. Scutellum very faintly and transversely rugulose, with the apex ochreous. Corium obscurely mottled with purplish, a white spot on disk, and the apical angle ochreous. Membrane pale transparent, some of the nervures pitchy at base. Antennæ ochreous, third, fourth, and fifth joints longest and subequal. Rostrum ochreous, just passing posterior coxæ. Underside of body and legs green; coxæ, bases of femora, and disk of abdomen ochreous. Long. 15 millim.; lat. pronot. ang. $7\frac{1}{2}$ millim.

Hab. Costa Rica, Irazu, Caché (*Rogers*).

In a second specimen the luteous markings are almost obsolete and the colour uniformly green.

Allied to *L. curvidens*, Mayr, but differs in having the pronotal angles less acute and much less produced anteriorly. The posterior margins of pronotum are straight, not sinuated as in *L. curvidens*.

MURGANTIA.

Murgantia, Stål, Stett. ent. Zeit. xxiii. p. 105 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 529.

This genus is closely allied to the following (*Arocera*, Spin.), but differs in the less-produced odoriferous orifice; the central lobe of the head is slightly longer than the lateral lobes; the tibiæ are strongly sulcated.

Murgantia is a genus confined to Tropical America; only one species ranges into the Nearctic fauna; and this, as far as is now known, does not extend further south than Central America. All the remainder are found in the Colombian, Amazonian, and Brazilian subregions, one of which is also found in this fauna.

1. **Murgantia munda.** (Tab. VII. fig. 20.)

Strachia munda, Dall. List Hem. i. p. 264. 19[1]; Stål, Stett. ent. Zeit. xxii. p. 141. 17; xxiii. p. 106. 79[2]; En. Hem. ii. p. 37. 3[3].

Hab. Mexico[2 3] (*Mus. Vind. Cæs.*); Panama (*coll. Dist.*).—Colombia[1].

A Mexican specimen is figured.

2. **Murgantia histrionica.** (Tab. VII. fig. 21.)

Strachia histrionica, Hahn, Wanz. Ins. ii. p. 116. f. 196[1]; Dall. List Hem. i. p. 263. 15[2]; Town. Glover, Ill. Ins. Ord. Hem. p. 68, t. ii. f. 22.

Murgantia histrionica, Uhler, U.S. Geol. Surv. Montana, pt. iv. Zool. & Bot. p. 396[3]; U.S. Geol. & Geog. Surv. ii. p. 290[4]; iii. p. 404[5]; Stål, En. Hem. ii. p. 37. 4[6]; Riley, 4th Ann. Rep. 1872, p. 35.

Hab. NORTH AMERICA, Colorado[3 4 5], Texas[4 6], Arizona[4], Indian Territory[4], California[4], Nevada[4], Delaware to Florida and Louisiana[4].—MEXICO[1 2 4 6] (*Mus. Berol.*), Oaxaca (*coll. Dist.*); GUATEMALA[4], Capetillo, Dueñas, Purula, San Gerónimo (*Champion*); COSTA RICA (*Van Patten*).

Dr. Lincecum, as quoted by Glover, gives the following account of the life-history of this insect:—"The eggs, generally ten to twelve in number, are deposited mostly on the underside of the leaves about the 15th March or beginning of April. These are set in two rows, on end, cemented together on the leaf, and require about six days in April or only four days in July to hatch out. There are two broods annually—the first brood hatching out in April, and the second in July. The young larva resembles the perfect insect, with the exception of being wingless. Twelve, sixteen, or eighteen days elapse from the deposition of the egg to the development of the perfect insect, which passes the winter or hibernates in the perfect or imago state, issuing forth from its winter retreat at the approach of warm weather. These insects do very great injury to the plants above mentioned *, especially to cabbages, the leaves they have punctured immediately *wilting* (?), as if from the effects of poison. They are said to be exceedingly numerous and destructive in Texas (and other Southern States), as many as 47,000 having been (in one instance) gathered by hand" (Am. Ent. & Bot.).

Prof. Uhler states that "in the Atlantic region this species seems to be steadily but slowly advancing northwards. Its introduction into Maryland has been effected since the late war; and now it is known as far north as the vicinity of the Pennsylvania boundary line in Delaware." The same author also remarks:—"Several of the links in the chain of varieties between this species and *M. munda* have already been found; and we may expect hereafter to see the two species united as mere forms of one." We ourselves, however, have seen nothing as yet to warrant such a probability.

The specimen figured is from Guatemala, and, excepting slight variations, is the dominant form in Central America. Hahn's figure would seem to represent a melanic and (judging from my own experience) scarce form of this species.

AROCERA.

Arocera, Spinola, Ess. Hém. p. 316 (1837); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 529.
Ooedosoma, Am. & Serv. Hist. des Hém. p. 128 (1843).

This genus, which is very closely allied to the preceding, is separated principally by the lobes of the head, which are subequal in length, or the lateral slightly more pro-

* Cabbages, turnips, radishes, mustard, and cruciferous plants.

duced than the central, and the odoriferous orifice being longer and much more produced. The anterior and lateral margins of the pronotum are slightly elevated and reflexed. Considerable variation occurs, as with all the brightly coloured Pentatominæ. The genus is confined to Tropical America.

1. **Arocera acroleuca.**

Pentatoma acroleucum, Perty, Del. Animal. Artic. p. 168, t. 38. f. 11[1].
Cimex acroleucus, Burm. Handb. ii. p. 366. 6[2].
Arocera aurantiaca, Spin. Ess. Hém. p. 318[3]; H.-S., Wanz. Ins. vii. p. 90[4].
Pentatoma æquinoctialis, Hope, Cat. i. p. 33.
Ooedosoma acroleucum, A. & S. Hist. des Hém. p. 128. 1[5].
Strachia acroleuca, Dall. List Hem. i. p. 263. 16[6].
Arocera acroleuca, Stål, En. Hem. ii. p. 38. 1[7].

Hab. NICARAGUA, Chontales (*coll. Dist.*); COSTA RICA, Irazu (*Rogers*).—GUIANA, Cayenne[5]; BRAZIL[1 2 3 4 6 7], Rio Janeiro[7].

2. **Arocera melanopyga.** (Tab. VII. fig. 11.)

Strachia melanopyga, Stål, Öfv. Vet.-Ak. Förh. 1858, p. 437. 1[1].
Arocera melanopyga, Stål, Stett. ent. Zeit. xxiii. p. 107. 85[2]; En. Hem. ii. p. 38. 3[3].

Hab. MEXICO[1 2 3].

The specimen figured is from Mexico, and is in the collection of Dr. Signoret.

3. **Arocera apta.** (Tab. VII. fig. 12.)

Strachia apta, Walker, Cat. Het. ii. p. 323. 41[1].

Hab. PANAMA (*Mus. Vind. Cæs.*).—BRAZIL, Amazon region[1].

The specimen from Panama here figured is brighter in hue than the type, and slightly larger. The three large bluish-black spots on each side of the sternum are a good distinctive character.

4. **Arocera protea,** n. sp. (Tab. VII. fig. 18.)

Testaceous; head with the central lobe much shorter than the lateral, the lateral margins raised and reflexed, the apices of the lateral lobes narrowly but deeply concave, posterior portion from anterior margin of eyes black; eyes also black. Antennæ black, joints gradually increasing in length, last three joints pilose, third joint clavate, fourth and fifth regularly thickened. Pronotum levigate, with the anterior border, apical portion of the lateral borders, a round spot at each humeral angle, and two subconical spots (narrowly connected at base) on posterior margin black. Scutellum with two basal subquadrate spots (connected with those on pronotum) and apical portion black. Corium with a central transverse black fascia. Connexivum with the apical margin of each segment black. Underside of body and head testaceous; legs, anterior margin of prosternum, some irregularly defined spots on each lateral margin of sternum, abdomen with a central longitudinal row of transverse fasciæ gradually diminishing in width from base to apex, a stigmatal row of rounded spots, and a marginal row of obconical spots black. Rostrum reaching posterior coxæ; first joint testaceous, remainder black.

Long. 12 millim.

Hab. Guatemala, San Gerónimo (*Champion*).

Allied to *A. apta*, Walk., differing in the shape of the body and scutellum, the central lobe of the head being shorter than the lateral, and in the colour of the legs, &c.; from *A. crucigera*, Hagl., it is distinguished by the shorter rostrum and the colour of the antennæ; it is also allied to *A. rufifrons*, Dall., but is separated from that species by the smaller and more convex body, smaller head, the basal joint of antennæ being concolorous, and the lateral margin of pronotum less reflexed.

5. **Arocera affinis,** n. sp. (*Arocera protea*, var. Tab. VII. fig. 19.)

Closely allied to the preceding, but head wholly black, and *central and lateral lobes subequal in length*; transverse band of corium broken, sinuated and abbreviated posteriorly, and preceded by a small rounded spot; scutellum with the apex testaceous.

Long. 10–12 millim.

Hab. Mexico (*Bilimek, Mus. Vind. Cæs.*); Guatemala, San Gerónimo (*Champion*); Nicaragua, Chontales (*coll. Dist.*).

In some specimens the transverse band of the corium is entire, as in the preceding species; but the relative lengths of the lobes and the colour of the head prevent them from being confused with that species. A Guatemalan specimen is figured.

6. **Arocera patibulata,** n. sp. (Tab. VII. fig. 17.)

Head black, elongate, lobes subequal in length, impunctate, transversely striate about centre; lateral lobes hollowed and concave at apex. Antennæ black; first, second, third, and fourth joints gradually increasing in length, fifth wanting, third joint clavate, fourth uniformly thickened. Pronotum black, sides raised and reflexed, with a large crucigerous prasinous fascia or disk; scutellum black, ornamented with a crucigerous fascia, prasinous in colour, extending from base to apex (the apical portion much narrowed) and fully across disk. Corium black, with a deeply sinuated basal spot, apical half irregularly defined, and apical two thirds of claval margin prasinous. Membrane black, with the apical border white. Connexivum alternately orange and black. Abdomen beneath orange-yellow, with a longitudinal row of transverse, central, segmental fasciæ, gradually diminishing in width from base to apex, a stigmatal row of rounded spots, a marginal segmental row of obconical spots (gradually decreasing in size from base to apex), sternum, rostrum, and legs black.

The rostrum about reaches posterior coxæ, the second joint of which is the longest. Body above smooth, sublevigate.

Long. 12 millim.

Hab. Costa Rica, Irazu (*Rogers*).

Besides its very different colour and markings, the anteriorly concave surface of the head, and the greater length of the same, are positive characters by which to separate *A. patibulata* from the two preceding species.

7. **Arocera splendens.** (Tab. VII. figg. 13 & 14.)

Pentatoma splendens, Blanchard, Hist. Nat. Ins. p. 148. 5[1]; D'Orb. Dict. Atlas, Hém. t. 4. f. 5.

Pentatoma? splendida, Dall. List Hem. i. p. 256. 58[2].

Pentatoma principalis, Stål, Öfv. Vet.-Ak. Förh. 1855, p. 182. 1.

Arocera principalis, Stål, Stett. ent. Zeit. xxiii. p. 107. 84[3].
Arocera splendens, Stål, Stett. ent. Zeit. xxiii. p. 107. nota[4]; En. Hem. ii. p. 38. 6[5].

Hab. MEXICO [2 3 5] (*coll. Signoret*; *Mus. Berol.*); BRITISH HONDURAS, Rio Hondo (*Blancaneaux*); GUATEMALA, Panzos, Vera Paz (*Champion*); COSTA RICA, Irazu and Rio Sucio (*Rogers*); PANAMA (*Boucard*).—COLOMBIA [1 2 4 5]; VENEZUELA [2].

The variety figured (from Costa Rica), besides the wider anterior and lateral borders to the pronotum, and the reddish colour of the scutellum, has the underside of the body uniform green, with only the margin reddish. Two varieties from Mexico in the Berlin Museum resemble this form, but have also the disk of the pronotum and the greater part of the corium of the same reddish hue; in these species, however, the underside of the body possesses the red macular markings as in typical and, to judge from their greater number and persistency, normal forms.

The typical specimen figured is from Mexico, the *A. principalis*, Stål, and is in the collection of Dr. Signoret.

8. **Arocera rufo-notata.** (Tab. VII. fig. 15.)

Arocera rufo-notata, Stål, Stett. ent. Zeit. xxii. p. 140. 7[1]; xxiii. p. 106. 83[2]; En. Hem. ii. p. 38. 7[3].

Hab. MEXICO [1 2 3] (*coll. Signoret*) (*Bilimek, Mus. Vind. Cæs.*).

VULSIREA.

Vulsirea, Spinola, Ess. Hém. p. 350 (1837); Dall. List Hem. i. p. 196 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 531.

We now approach that portion of the subfamily Pentatominæ in which the abdomen is more or less distinctly spinous at the base. This genus possesses that character, and has also the basal joints of the antennæ longer than the head; the lobes of the head are subequal in length.

Vulsirea is confined to the Antilles and Tropical America; of three described species two are found in this fauna.

1. **Vulsirea insignis.**

Edessa insignis, Blanch. Hist. Nat. Ins. p. 144. 3[1].
Vulsirea liturata, Dall. List Hem. i. p. 273. 7[2].
Taurocerus cinctus, H.-S. Wanz. Ins. ix. p. 316, f. 1001[3].
Vulsirea insignis, Stål, Stett. ent. Zeit. xxiii. p. 108. 89[4]; En. Hem. ii. p. 39. 1[5].

Hab. MEXICO [1 4 5] (*coll. Dist.*).—SOUTH AMERICA [2].

Of two specimens of this species in my own collection, the connexivum varies in its ground-colour from luteous to pale sanguineous. Herrich-Schäffer as a habitat writes "Wahrscheinlich aus Ostindien," which is clearly erroneous.

2. **Vulsirea violacea.**

Cimex violaceus, Fabr. Syst. Rhynch. p. 167. 63; H.-S. Wanz. Ins. iv. p. 89, f. 425 [1].
Rhaphigaster abdominalis, Hope, Cat. i. p. 32.
Vulsirea violacea, Stål, Hem. Fabr. i. p. 31. 1; En. Hem. ii. p. 39. 3 [2].
Stoll, Pun. f. 133.

Var. *b*.

Vulsirea tau, Voll. Versl. Ak. Amst. Nat. ser. 2, ii. p. 186. 56 [3].
Vulsirea lativentris, Walk. Cat. Het. ii. p. 353. 4 [4].

Var. *c*.

Vulsirea ancora, Spin. Ess. Hém. p. 351. 1 [5]; A. & S. Hist. des Hém. p. 143. 2 [6]; H.-S. Wanz. Ins. viii. p. 12 [7]; Dall. List Hem. i. p. 272. 2 [8].

Var. *d*.

Vulsirea nigro-rubra, Spin. Ess. Hém. p. 351. 2 [9]; A. & S. Hist. des Hém. p. 143. 1 [10]; Dall. List Hem. i. p. 271. 1 [11].
Strachia ponderosa, Stål, Öfv. Vet.-Ak. Förh. 1854, p. 233. 1.
Pentatoma (*Vulsirea*) *nigro-rubra*, Guér. in Sagra's Hist. de Cuba, Ins. p. 372 [12].

Hab. Mexico [2], Oaxaca [4]; Costa Rica, Irazu (*Rogers*); Panama (*coll. Dist.*).—Antilles [2], Cuba [9 10 11 12]; South America [8]; Brazil [1 2 5 6 7], Rio Janeiro [3].

In enumerating the varieties *b*, *c*, *d*, I have followed Stål, adding, however, the *V. lativentris*, Walk. The specimens which I have seen from Costa Rica and Panama agree with the typical form.

PHARYPIA.

Pharypia, Stål, Stett. ent. Zeit. xxii. p. 139 (1861); Öfv. Vet.-Ak. Förh. 1867, p. 530.
Ptilarmus, Stål, Stett. ent. Zeit. xxii. p. 139 (1861).

This genus is closely allied to the preceding, and differs principally by the length of the first joint of the antennæ, which either does not reach or only just reaches the apex of the head. This is a Neotropical genus; and two of the three species here included have not been recorded beyond Central America.

1. **Pharypia pulchella.**

Cimex pulchellus, Drury, Ill. Nat. Hist. Ins. iii. p. 67, t. 46. f. 8 [1].
Cimex concentricus, Burm. Handb. ii. p. 365. 5 [2].
Vulsirea pulchella, Dall. List Hem. i. p. 272. 4 [3]; Stål, Stett. ent. Zeit. xxiii. p. 107. 86 [4]; En. Hem. ii. p. 40. 3 [5].
Vulsirea formosa, Dall. List Hem. i. p. 272. 5 [6].
Strachia notabilis, Walk. Cat. Het. ii. p. 321. 38 [7].
Stoll, Pun. f. 30 et 142.

Hab. Mexico [4 5]; Honduras (*Drury* [1]); Guatemala, La Tinta, Vera Paz (*Champion*); Panama (*coll. Dist.*).—Colombia [3 7]; Venezuela [3]; Brazil [5], Para [2 6], Amazon region [7].

All the Central-American specimens which we have received are of the form *pulchellus*, Drury. In one specimen, from Panama, the red bands across the corium and scutellum have a tendency to become macular by partial obliteration.

2. **Pharypia nitidiventris.** (Tab. VI. fig. 24.)

Ptilarmus nitidiventris, Stål, Stett. ent. Zeit. xxii. p. 140. 1[1].
Pharypia nitidiventris, Stål, Stett. ent. Zeit. xxiii. p. 107. 87[2]; En. Hem. ii. p. 40. 4[3].
Vulsirea transducta, Walk. Cat. Het. ii. p. 352. 3[4].

Hab. Mexico [1 2 3] (*Sallé*), Orizaba[4], Valladolid, Yucatan (*Gaumer*); Costa Rica (*Van Patten*), Irazu (*Rogers*).

The typical specimen figured is from Mexico, and is in the collection of the Stockholm Museum.

3. **Pharypia fasciata.** (Tab. VI. fig. 25.)

Ptilarmus fasciatus, Haglund, Stett. ent. Zeit. xxix. p. 156. 1[1].
Pharypia fasciata, Stål, En. Hem. ii. p. 40. 5[2].

Hab. Mexico [1 2].

The figure is from a typical specimen kindly forwarded from the Stockholm Museum. *P. fasciata* is closely allied to the preceding species; and its principal differential character appears to be the length of the rostrum, which, according to Haglund, is "multo longiore medium segmenti penultimi abdominis fere attigente."

NEZARA.

Nezara, Amyot & Serville, Hist. des Hém. p. 143 (1843); Öfv. Vet.-Ak. Förh. 1867, p. 530.
Rhaphigaster (part.), Dallas, List Hem. i. p. 274 (1851).

This genus is universally distributed, being found in the Nearctic, Neotropical, Palæarctic, Ethiopian, Oriental, and Australian regions; one species, *N. viridula*, has also the same wide range as the genus to which it belongs. It is distinguishable from the preceding genus by the shorter rostrum, with the second joint not shorter but longer than the third.

1. **Nezara stictica.** (Tab. VII. fig. 22.)

Rhaphigaster sticticus, Dallas, List Hem. i. p. 281. 22[1].
Nezara stictica, Stål, En. Hem. ii. p. 40. 1[2]; Berg, Hem. Arg. i. p. 56. 67[3].

Hab. Mexico [1 2], Oaxaca (*Mus. Berol.*), Valladolid, Yucatan (*Gaumer*).—Colombia [1]; British Guiana[1]; Argentine Republic [3].

A Mexican specimen is figured.

2. Nezara viridula.

Cimex viridulus, Linn. Syst. Nat. ed. 10, i. p. 444. 28; Mus. Lud. Ulr. p. 172. 6; Syst. Nat. ed 12, i. 2, p. 721. 39; Fabr. Syst. Ent. p. 710. 66; Goeze, Ent. Beitr. ii. p. 196. 39; Fabr. Spec. ii. p. 354. 95; Mant. ii. p. 291. 122; Gmel. Syst. Nat. i. 4, p. 2150. 39; Fabr. Ent. Syst. iv. p. 109. 110; Syst. Rhynch. p. 166. 57.

Cimex hemichloris, Germ. in Silb. Rev. v. p. 166. 94.

Rhaphigaster orbus, Stål, Öfv. Vet.-Ak. Förh. 1853, p. 221. 1.

Var. *c*, Stål, En. Hem. ii. p. 41.

Cimex torquatus, Fabr. Syst. Ent. p. 710. 65; Goeze, Ent. Beitr. ii. p. 245. 8; Fabr. Spec. ii. p. 353. 93; Mant. ii. p. 291. 119; Gmel. Syst. Nat. i. 4, p. 2150. 290; Fabr. Ent. Syst. iv. p. 108. 107; Syst. Rhynch. p. 166. 56.

Pentatoma flavicollis, Palis. Beauv. Ins. p. 185[1].

Pentatoma flavicornis, Palis. Beauv. Ins. Hém. t. 11. f. 4.

Rhaphigaster torquatus, H.-S. Wanz. Ins. iv. p. 100, f. 447[2].

Var. *b*, Stål, En. Hem. ii. p. 41.

Cimex smaragdulus, Fabr. Syst. Ent. p. 711. 69; Goeze, Ent. Beitr. ii. p. 246. 9; Fabr. Spec. ii. p. 354. 99; Mant. ii. p. 292. 126; Gmel. Syst. Nat. i. 4, p. 2153. 312; Fabr. Ent. Syst. iv. p. 109. 114; Wolff, Ic. Cim. p. 56. 53, f. 53[3]; Fabr. Syst. Rhynch. p. 167. 61[4].

Cimex spirans, Fabr. Ent. Syst. Suppl. p. 533. 114–5; Syst. Rhynch. p. 167. 62.

Cimex viridissimus, Wolff, Ic. Cim. ii. p. 55. 52, f. 52[5].

Pentatoma unicolor, Hope, Cat. i. p. 38[6].

Pentatoma subsericea, Hope, Cat. i. p. 38[7].

Pentatoma Leei, Hope, Cat. i. p. 38[8].

Pentatoma tripunctigera, Hope, Cat. i. p. 38[9].

Pentatoma proxima, Hope, Cat. i. p. 38[10].

Pentatoma chinensis, Hope, Cat. i. p. 38[11].

Pentatoma chloris, Hope, Cat. i. p. 38[12].

Pentatoma propinqua, Hope, Cat. i. p. 39.

Rhaphigaster smaragdulus, Kol. Mel. iv. p. 55. 182.

Pentatoma plicaticollis, Luc. Expl. Alg. Ins. p. 87. 126; Hém. t. 3. f. 9[13].

Rhaphigaster subsericeus, Dall. List Hem. i. p. 275. 3[14].

Var. *a*, Stål, En. Hem. ii. p. 41.

Pentatoma smaragdula, L. Duf. Rech. p. 157. 4.

Nezara smaragdula, A. & S. Hist. des Hém. p. 144. 1[15]; Fieb. Eur. Hem. p. 330. 1[16].

Nezara approximata, Reiche et Fairm. Voy. Abyss. Ent. p. 443. 1[17].

Rhaphigaster prasinus, Dall. List Hem. i. p. 274. 2[18].

Nezara prasinus, Sign. Ann. Soc. Ent. France, sér. 3, viii. p. 935[19].

Pentatoma (Nezara) smaragdula, Guér. in Sagra's Hist. Cuba, Ins. p. 373[20].

Nezara prasina, Muls. & Rey, Pun. Pent. p. 295. 3, excl. syn. Lin.

Nezara viridula, Stål, Hem. Afr. i. p. 193. 2[21]; Hem. Fabr. i. p. 31. 1[22]; En. Hem. ii. p. 41. 6[23], v. p. 91. 1[24]; Mayr, Reise Nov. Hem. p. 67[25]; Dist. Ann. & Mag. Nat. Hist. ser. 5, iii. p. 45[26]; Town. Glover, Ill. Ins. Ord. Hem. p. 53, t. vii. f. 20[27].

Nezara viridis, Scott, Ann. & Mag. Nat. Hist. ser. 4, vol. xiv. p. 290[28].

Hab. North America, South United States[27], Texas[22 23].—Costa Rica (*coll. Dist.*).—

ANTILLES, Cuba [20 22 23], Jamaica [18], St. Domingo [1 18], St. Vincent [9]; COLOMBIA [21]; VENEZUELA [18]; GUIANA, Cayenne [15]. EUROPE [2 16], Madeira [4 18], Teneriffe [10]. AFRICA [24], Morocco (*Blackmore*), Algeria [13], Abyssinia [17], West Coast [12 18 21] (*coll. Dist.*). SOUTH AFRICA [18 21], Cape of Good Hope [8 18 25], Natal (*coll. Dist.*); MADAGASCAR [19]. ASIA [24]; CHINA [11]; JAPAN [28]; COREA [18]; INDIA [3 5], Bombay (*Leith*), Cuna [7], N. Bengal [14], Assam [26]; MALACCA (*coll. Dist.*); JAVA [6 18]; PHILLIPINES [18]; CELEBES (*coll. Dist.*). AUSTRALIA, Queensland (*coll. Dist.*).

Two specimens received from Costa Rica represent the typical form of the species (Var. *a*, Stål). Very few observers appear to have paid much attention to this widely spread insect. It is probable that its wide dissemination has been greatly assisted by the winds; and the writer, on his return from India a few years since, found several of this species which had been blown on board when more than a hundred miles south-west of Madagascar.

3. **Nezara viridans.**

Rhaphigaster viridans, Stål, Eug. Resa, Ins. p. 228. 21 [1].
Nezara viridans, Stål, En. Hem. ii. p. 41. 7 [2].

Hab. PANAMA [1 2].—GALAPAGOS ISLES [1 2]; PERU, Callao [1 2].

I insert this species, which I have not seen, on the authority of Stål.

4. **Nezara marginata.** (Tab. VII. fig. 23.)

Pentatoma marginata, Palis. Beauv. Ins. p. 147, Hém. t. 10. f. 1 [1].
Nezara marginata, A. & S. Hist. des Hém. p. 145. 2 [2]; Stål, En. Hem. ii. p. 42. 10 [3].
Rhaphigaster spirans, Dall. List Hem. i. p. 280, 17 [4]; Stål, Stett. ent. Zeit. xxiii. p. 106. 80 [5].
Pentatoma (Nezara) marginata, Guér. in Sagra's Hist. Cuba, Ins. p. 374 [6].
Nezara jurgiosa, Stål, Sett. ent. Zeit. xxiii. p. 106. 81 [7].

Hab. MEXICO [3 4 5 7] (*coll. Sign.*, *Mus. Vind. Cæs.*, *Mus. Berol.*); GUATEMALA, San Juan, Vera Paz, Capetillo, Aceituno, Dueñas (*Champion*); BRITISH HONDURAS, river Sarstoon (*Blancaneaux*), COSTA RICA, Irazu (*Rogers*); PANAMA (*Boucard*).—ANTILLES, Cuba [3 6], St. Domingo [1 2]; COLOMBIA [3], Bogota (*coll. Dist.*).

A Mexican specimen is figured.

BANASA.

Banasa, Stål, Rio Hem. i. p. 24 (1860).
Nezara (part.), Stål, Öfv. Vet.-Ak. Förh. 1867, p. 530.
Atomosira, Uhler, Proc. Bost. Soc. Nat. Hist. xiv. p. 98 (Feb. 1871).

This genus is closely allied to *Nezara*. The body is subovate and less oblong, head sinuated on each side, lobes of equal length, and apex rounded. This is another of those genera in which the differences seem more apparent than real; the shape of the body and different coloration gives *Banasa* a more distinct appearance from the genus

Nezara than structural details fully carry out. It extends through the Nearctic and Neotropical regions.

1. **Banasa varians.** (Tab. VII. fig. 7.)

Rhaphigaster dimidiatus, Stål, Rio Hem. i. p. 22. 2[1].
Bonasa varians, Stål, En. Hem. ii. p. 43. 2[2].
Pentatoma basalis, Walk. Cat. Het. ii. p. 291. 51[3].
Rhaphigaster derivatus, Walk. Cat. Het. ii. p. 361. 37[4].

Hab. GUATEMALA, Chiacam, Vera Paz, Zapote, San Gerónimo (*Champion*).—WEST INDIES (*coll. Dist.*); BRAZIL, Amazon region[3], Ega[4], Tejuca[4], Constancia[4], Petropolis[4], Rio Janeiro[1 2 3].

Of this species Stål remarks "Quoad colores valde variabilis."

2. **Banasa stålii,** n. sp. (Tab. VIII. fig. 3.)

Testaceous; strongly but somewhat sparingly punctate. Head with the central lobe and the apices of the lateral lobes impunctate; lateral margins narrowly pitchy. Antennæ pilose, luteous; third joint much longer than second, testaceous towards tip; fourth about equal in length to third and testaceous; fifth wanting. Rostrum about reaching posterior coxæ, with the tip black. Pronotum with the anterior half much paler in colour, the lateral margins slightly reflexed, posterior and darker portion rather more thickly punctate, lateral angles subprominent. Scutellum with the apex strongly excavated, extreme apical margin pale, impunctate. Corium with the basal margin narrowly pale luteous. Membrane obscure hyaline, pitchy at base. Abdomen above pitchy; connexivum luteous, with the apical angle of each segment pitchy. Underside of body and legs luteous.
Long. 13 millim., lat. pronot. angl. 7 millim.

Hab. COSTA RICA, Caché (*Rogers*).

I submitted this specimen (one only) to the late Prof. Stål, the founder of the genus, and the keeper of the Rhynchotal portion of the Entomological collection of the Stockholm Museum; otherwise I should have hesitated to describe this single example. However, as it has been compared by Stål with his types, and by myself with those of Dallas, there is no doubt of its nondescript character. Allied to *B. varians*, it is distinguished from that species by its much more elongated form and not rounded but sinuated lateral margins of the pronotum.

3. **Banasa albo-apicata.**

Rhaphigaster albi-apicatus, Stål, Rio Hem. i. p. 22. 3[1].
Banasa albo-apicata, Stål, En. Hem. ii. p. 43. 4[2].

Hab. HONDURAS[2].—COLOMBIA[2]; BRAZIL[2], Rio Janeiro[1 2].

This species is included on the authority of Stål[2]. I have not seen a specimen.

4. **Banasa imbuta.** (Tab. VII. fig. 10.)

Rhaphigaster imbutus, Walk. Cat. Het. ii. p. 358. 16[1].

Hab. MEXICO, Vera Cruz[1]; GUATEMALA, San Gerónimo (*Champion*); COSTA RICA, Caché (*Rogers*).

PIEZODORUS.

Piezodorus, Fieber, Eur. Hem. pp. 78 et 329 (1861) ; Stål, En. Hem. v. p. 66 (1876).
Nezara (part.), Stål, Hem. Afr. i. p. 192 (1864) ; Öfv. Vet.-Ak. Förh. 1867, p. 530.

The best differential characters amongst those enumerated by Stål are, perhaps, "carina mesosterni anterius distinctius elevata, ibidem incrassata, vel plerumque laminata, plerumque quoque inter coxas anticas libere prominula." This genus has an extremely wide range, although the species it contains are few in comparison. It is recorded from the Neotropical, Ethiopian, Palæarctic, Oriental, and Australian Regions; and one species, *P. lituratus*, Fabr., is somewhat common in England.

1. **Piezodorus guildingi.** (Tab. VII. fig. 6.)

Rhaphigaster guildinii, Hope, Cat. i. p. 31[1]; Dall. List Hem. i. p. 283. 28[2].
Piezodorus guildinii, Stål, En. Hem. ii. p. 45. 2[3].

Hab. GUATEMALA, San Gerónimo (*Champion*).—CUBA [3]; ST. VINCENT [1]; S. AMERICA [2].

A Guatemalan specimen is figured.

PHINEUS.

Phineus, Stål, Stett. ent. Zeit. xxiii. p. 97 (1862) ; Öfv. Vet.-Ak. Förh. 1867, p. 530.

The head is short, and toothed on each side at the base, a character alone sufficient to differentiate it here. But one species is at present recorded, and that only from Mexico.

1. **Phineus fusco-punctatus.** (Tab. VII. fig. 8.)

Phineus fusco-punctatus, Stål, Stett. ent. Zeit. xxiii. p. 97. 52[1]; En. Hem. ii. p. 46. 1[2].

Hab. MEXICO [1 2].

The specimen figured is a typical one belonging to the collection of Dr. Signoret.

TAUROCERUS.

Taurocerus, Amyot et Serville, Hist. des Hém. p. 151 (1843); Dallas, List Hem. i. p. 197. 40 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 531.
Canoca, Walker, Cat. Het. ii. p. 404 (1867).

The second joint of the antennæ is longer than the first, which does not reach the apex of the head; the posterior angles of the sixth segment of the abdomen are acutely produced; the tibiæ are not sulcated; and the lateral angles of the pronotum are much produced. *Taurocerus* is confined to the Neotropical Region; three species are known, and all occur in this fauna.

1. **Taurocerus achilles.** (Tab. VII. fig. 24.)

Taurocerus achilles, Stål, Stett. ent. Zeit. xxiii. p. 108. 92[1]; En. Hem. ii. p. 46. 1[2].

Taurocerus divergens, Walk. Cat. Het. ii. p. 392. 4[3]; Stål, En. Hem. ii. p. 46. 2[4].
Taurocerus edessoides, A. & S. Hist. des Hém. p. 151. 1[5].

Hab. MEXICO [1 2].— BRAZIL [4 5], Amazon Region [3], S. Paulo (*coll. Dist.*).

The specimen figured is a typical one from Mexico, and was lent to me for that purpose by Dr. Signoret, in whose collection it remains. I have thus been enabled to compare *T. achilles*, Stål, with *T. divergens*, Walk., and find that they are identical, and not distinct as Stål considered [2].

2. **Taurocerus edessoides.** (Tab. VII. fig. 25.)

Avelius edessoides, Spinola, Ess. Hém. p. 347. 1[1].
Taurocerus edessoides, Dall. List Hem. i. p. 302. 1[2]; Stål, En. Hem. ii. p. 47. 4[3].
Taurocerus hector, Stål, Stett. ent. Zeit. xxiii. p. 108. 93[4]; En. Hem. ii. p. 47. 3[5].

Hab. MEXICO [2 4 5]; GUATEMALA, San Juan and Senahu, Vera Paz (*Champion*).— COLOMBIA [2 5]; BRAZIL [1 3], Para [2], Ega (*coll. Dist.*).

The specimen figured is from Mexico, and was lent to me as typical of *A. edessoides*, Spin. This identification I agree with Mr. Dallas in considering correct; and therefore I have been compelled to place *T. hector*, Stål, as a synonym of the same.

3. **Taurocerus abrupta.** (Tab. VIII. fig. 1.)

Canaca abrupta, Walk. Cat. Het. ii. p. 404[1].

Hab. GUATEMALA [1].

The specimen figured is the type and only specimen in the collection of the British Museum. Mr. Champion has hitherto not met with this species in Guatemala.

ARVELIUS.

Arvelius, Spinola, Ess. Hém. p. 344 (1837); Dallas, List Hem. i. p. 197. 39 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 531.

This genus is at once separated from the preceding by the lateral lobes of the head, which are longer than the central lobe and acutely produced. But one species is known, a widely-ranging Neotropical form, which is found also in the southern portion of the Nearctic Region.

1. **Arvelius albo-punctatus.**

Cimex albo-punctatus, De Geer, Mém. iii. p. 331. 5, t. 34. f. 6; Goeze, Ent. Beytr. ii. p. 243. 36.
Cimex gladiator, Fabr. Syst. Ent. p. 705. 43; Goeze, Ent. Beytr. ii. p. 239. 12; Fabr. Spec. Ins. ii. p. 348. 59; Mant. Ins. ii. p. 285. 68; Gmel. Syst. Nat. i. 4, p. 2140. 213; Fabr. Ent. Syst. iv. p. 101. 85; Syst. Rhynch. p. 162. 36.
Cimex leucostictos, Gmel. Syst. Nat. i. 4, p. 2148. 282.
Pentatoma gladiator, Palis. Beauv. Ins. p. 127, Hém. t. 9. f. 1[1]; St.-Fargeau et Serv. Enc. Méth. x. p. 56.

Acanthosoma gladiator, Burm. Handb. ii. p. 359. 1[2]; Blanch. Hist. iii. p. 146. 1[3]; H.-S. Wanz. Ins. viii. p. 5.

Acanthosoma luteicornis, Hope, Cat. i. p. 30[4].

Arvelius gladiator, Spin. Ess. Hém. p. 346; H.-S. Wanz. Ins. v. p. 104, f. 557, 558[5].

Arvelius albo-punctatus, A. & S. Hist. des Hém. p. 150. 1; Dall. List Hem. i. p. 302. 1[6]; Stål, Stett. ent. Zeit. xxiii. p. 108. 91[7]; En. Hem. ii. p. 47. 1[8]; Berg, Hem. Argent. p. 59. 73[9]; Uhler, Bull. U.S. Geol. & Geogr. Surv. ii. p. 290[10]; Town. Glover, Ill. Ins. Ord. Hem. p. 25, t. viii. f. 29.

Pentatoma (*Arvelius*) *albopunctata*, Guér. in Sagra's Hist. Cuba, Ins. p. 374[11].

Stoll, Pun. f. 12.

Hab. North America, Texas[10], California[10], Arizona[10], Florida[10].—Mexico[5 7 8 10] (*Mus. Berol.*); Guatemala, Capetillo, San Gerónimo, Tamahu, Cubilquitz, San Juan, and La Tinta (*Champion*); Costa Rica, Caché (*Rogers*); Panama (*coll. Dist.*).—Antilles, Cuba[8 10 11], St. Domingo[1], Jamaica[6], St. Vincent[4], Trinidad (*coll. Dist.*); Colombia[6 8]; Guiana, Demerara[2] (*coll. Dist.*); Brazil[3 5 6 8], Rio Janeiro[8]; Argentine Republic[9].

This is an extremely variable form. Stål remarks, "Variat antennis pictura nigra destitutis." It also varies in size, colour, and in the amount and nature of its punctuation. In colour it is usually luteous, sometimes varying more or less to bright pale green; and as regards the punctuation, Prof. Uhler states, as the result of an examination of his own series, "Punctures and rugæ are coarser or finer according to the size of the specimen." This peculiarity I have not found to obtain in my own specimens or in those examined by me.

PHALŒCUS.

Phalœcus, Stål, Stett. ent. Zeit. xxiii. p. 98, nota (1862); En. Hem. ii. p. 47 (1872).

The elevated meso- and metasternum, with the depressed body and triangular head, of which the lateral lobes are the longest, are characters which at once denote this well-marked genus. It is Neotropical in its habitat, but one species having hitherto been recorded, the *P. pustulatus*, De Geer. A second species is now added.

1. **Phalœcus decoratus**, n. sp. (Tab. VII. fig. 9.)

Head piceous, with lateral margins and base of central lobe luteous, margins reflexed; antennæ luteous, spotted with fuscous; first and third joints shortest, the last longer than the first; second, fourth, and fifth subequal in length. Pronotum piceous, with the following luteous markings—one on each lateral margin, two on anterior margin, a fainter waved broken transverse fascia across disk between lateral angles, between which and anterior margin are five irregular spots; lateral angles slightly prominent. Scutellum and corium black with cupreous reflections, the first with five bright luteous spots, one in each basal angle, one about the centre of each lateral margin, and one at the apex, central two the smallest. Corium with the basal margin narrowly luteous, and three submarginal bright luteous spots arranged longitudinally. Membrane fuscous. Abdomen above piceous, connexivum luteous, apical segmental margins black. Underside of body and legs luteous; sternum and abdomen with a broad marginal piceous band, which contains a marginal row of luteous spots; rostrum luteous, with the tip narrowly black, about reaching the intermediate coxæ.

Long. 8–10 millim.

Hab. British Honduras, Belize (*Blancaneaux*); Guatemala, La Tinta, Tamahu, Pancina, and Chiacam (*Champion*).

Differs from *P. pustulatus*, De Geer, by its more linear form, the head less cleft at the apex, the different markings above, and the abdomen not unicolorous beneath. It appears to be a rare insect, as we have only received a single example from each of the above localities.

BOTHROCORIS.

Brachystethus, subg. *Bothrocoris*, Mayr, Reis. Novara, Hem. p. 68 (1866).
Bothrocoris, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 532.
Brachystethus, Dallas (part.), List Hem. i. p. 317. 4.

This genus is only separated from the following by the shortness of the odoriferous apertures. The metasternum has a distinct keel, which is not emarginate anteriorly nor produced beyond the intermediate coxæ. Stål writes "jugis et tylo æque longis." I should rather state lateral lobes a little longer than central; and "angulis lateralibus thoracis haud productis" should rather be rendered "not or but slightly produced."

This genus is a Neotropical one. Only one species has hitherto been described; a second is here added, which, though found in Central America, has also been received from Demerara. It is probably, from the habitats of the other species, more or less a Brazilian genus.

1. **Bothrocoris fusco-punctatus**, n. sp. (Tab. VIII. fig. 5.)

Ochreous, somewhat thickly covered with fuscous punctures. Head with the margins reflexed; lateral lobes a little longer than the central, margined with luteous or sanguineous. Antennæ with the first three joints increasing successively in length, fourth and fifth subequal; first, second, and third joints ochreous, spotted with black; fourth black; fifth black, with basal half luteous. Pronotum with the lateral angles obtusely prominent; lateral margins luteous or sanguineous; and two waved black fasciæ on disk, a little behind anterior margin. Scutellum with two black deeply excavated foveæ at base; membrane ochraceous; connexivum luteous, with the segmental, basal, and apical margins black. Underside of body and legs concolorous; marginal border of abdomen as above.

Long. 11 millim., lat. pronot. ang. $7\frac{1}{2}$ millim.

Hab. Panama (*coll. Dist.*).—Guiana, Demerara (*coll. Dist.*).

Very distinct from *B. quinquedentatus*, Spin. Lateral angles of pronotum more produced, scutellum sinuated, &c.

BRACHYSTETHUS.

Edessa, subg. *Brachystethus*, Laporte, Ess. Hém. p. 63 (1832).
Brachystethus, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 532.
Brachystethus (part.), Dallas, List Hem. i. p. 317. 4 (1851).

This genus is separated from the preceding by the longer and more produced odoriferous apertures. The species are all confined to Tropical America.

1. **Brachystethus vicinus.** (Tab. VIII. fig. 4.)

Brachystethus vicinus, Sign. Ann. Soc. Ent. Franc. sér. 2, ix. p. 344. 3[1]; Stål, En. Hem. ii. p. 48. 3[2].

Hab. Costa Rica, Caché (*Rogers*).—Colombia[2], Bogota (*coll. Dist.*); Brazil[1 2], Ega, Amazons (*coll. Dist.*).

The specimen figured is a single example received from Costa Rica.

2. **Brachystethus rubro-maculatus,** var. (Tab. VIII. fig. 6.)

Brachystethus rubro-maculatus, Dall. List Hem. i. p. 337. 4[1]; Sign. Ann. Soc. Ent. Fr. sér. 2, ix. p. 345. 5[2]; Stål, Stett. ent. Zeit. xxiii. p. 118. 116[3]; En. Hem. ii. p. 48[4].

Brachystethus sex-maculatus, H.-S. Wanz. Ins. ix. p. 310, f. 1010[5].

Hab. Mexico[1 2 3 4 5] (*Mus. Berol.*; *Bilimek*, *Mus. Vind. Cæs.*; *coll. Sallé*), Valladolid, Yucatan (*Gaumer*); British Honduras[1], Belize, river Sarstoon (*Blancaneaux*); Guatemala, San Gerónimo, La Tinta and Sabo, Vera Paz (*Champion*); Costa Rica (*coll. Dist.*), Caché (*Rogers*); Panama (*coll. Dist.*), Matachin (*Schunke*, *coll. Oberthür*).

This is a most variable species, both in colour and punctuation. All the specimens are more or less of the dull hue and pattern of the variety figured (which came from Yucatan), in which the spots of the pronotum and corium become irregularly enlarged and the last often confluent, and also possess the extremely coarse punctuation of the scutellum—which, compared with typical and normal forms, would raise a presumption that this variety had become constant in these characters, and must therefore be raised to specific rank. I have, however, seen all the intermediate links, both in colour and punctuation, including an undoubted Mexican specimen which has almost this identical Yucatan facies, save in brightness of hue. In this species we may see the extreme of varietal segregation, without finding any sufficient aggregate of characters to note the existence of more than one "species."

PEROMATUS.

Peromatus, Amyot et Serville, Hist. des Hém. p. 156 (1843); Dallas, List Hem. i. p. 316. 1 (1851).

The distinct keel to the metasternum, which is notched or bifid in front, agrees with the following genus (*Edessa*) in at once separating both these genera from any of the preceding. *Peromatus* differs from *Edessa* in having the antennæ of four joints only, and is a distinctly Neotropical genus.

1. **Peromatus notatus.** (Tab. VIII. fig. 8.)

Edessa notata, Burm. Handb. ii. 1, p. 354. 1[1]; H.-S. Wanz. Ins. iv. p. 17, f. 363[2]; vii. p. 126.

Peromatus notatus, A. & S. Hist. des Hém. p. 156. 1[3]; Dall. List Hem. i. p. 318. 1[4]; Hagl. Stett. ent. Zeit. xxix. p. 162. 2[1]; Stål, En. Hem. ii. p. 48. 1[5].

Hab. GUATEMALA, Zapote (*Champion*); COSTA RICA, Irazu (*Rogers*); PANAMA (*Boucard*). —BRAZIL[2 3 4 5], Para [1], Minas Geraës [5], Rio Janeiro [1].

This species varies in the length and coloration of the pronotal spines, which are sometimes luteous or castaneous; and the upper surface of the body is also most variable in colour in different specimens. Of three specimens received from Central America there is a remarkable constancy in these respects, one of which, from Panama, is figured.

2. **Peromatus robustus.**

Peromatus robustus, Haglund, Stett. ent. Zeit. xxix. p. 161. 1 [1]; Stål, En. Hem. ii. p. 49. 3 [2].

Hab. MEXICO [1 2], Vera Cruz [2].

I have not seen this species. It seems closely allied to *P. validus*, Dall., a Brazilian form; and, from Haglund's description, it must be easily recognized from the preceding species by the obtuse spines of the pronotum not being constricted at the base and by the colour of the antennæ, "articulo primo excepto, nigris."

3. **Peromatus truncatus,** n. sp. (Tab. X. fig. 1.)

Ochreous, shining; head sparingly punctured, the lateral lobes transversely striated. Pronotum sparingly punctate and rugulose; anterior margin broadly smooth and impunctate, behind which it is transversely and much more decidedly rugulose; pronotal angles produced into short, broad, flat, obtuse processes. Scutellum somewhat thickly punctate, and rugulose at base; corium purplish, opaque, very thickly and finely punctured, the nervures shining luteous; membrane dark, shining, cupreous. Body beneath ochreous, a purplish patch at odoriferous aperture, on outer margin of which is a large shining luteous spot; abdomen with a submarginal row of pitchy spots situated on segmental incisures, a faint central longitudinal fascia, and posterior margin of sixth abdominal segment also pitchy; antennæ ochreous, third joint very long, remainder wanting.

Long. 21 millim., lat. pronot. ang. 13 millim.

Hab. MEXICO (*Mus. Berol.*).

This small and distinct species is most closely allied to *P. nodifer*, West., but differs from that species by the broad, flat and truncated angles of the pronotum. The figure is from a specimen in the Berlin Museum kindly lent me by Prof. Peters.

EDESSA.

Edessa (part.), Fabricius, Syst. Rhynch. p. 145 (1803).

Edessa, Amyot et Serville, Hist. des Hém. p. 158 (1843); Dallas, List Hem. i. p. 317 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 532.

Pentatoma, subg. *Ascra*, Say, New Harm. Ind. Jan. 1832; Compl. Writ. i. p. 304 (1859).

Dorypleura, Amyot et Serville, Hist. des Hém. p. 157 (1843).

Hypoxys, Amyot et Serville, Hist. des Hém. p. 157 (1843).

Pygoda, Amyot et Serville, Hist. des Hém. p. 159 (1843).

Aceratodes, Amyot et Serville, Hist. des Hém. p. 160 (1843); Dallas, List Hem. i. p. 317. 3 (1851).

This genus differs from the preceding in having five-jointed antennæ; other differences have prompted further generic subdivision; but the simpler and more comprehensive view may be now said to universally obtain. This is by far the largest genus of the Pentatominæ, and occupies in the Rhynchota a position in many respects analogous to that of the Lepidopterous genus *Papilio*. Both possess structural differences which have been used in other portions of either order for generic differentiation; both, however, are dominated by a structure so distinct as to logically raise the genus to the position of a subfamily, if such generic subdivision took place. *Edessa*, however, is almost confined to the Neotropical Region; *E. bifida*, Say, is a Nearctic form, but, according to Townend Glover, has not yet been discovered north of South Carolina.

Very little is recorded as to the habits of the Edessas. Sir Hans Sloane, in his 'Natural History of Jamaica,' figures a species (tab. 237. f. 15, 16) which appears to somewhat resemble *E. cornuta*, Dall., and remarks that "when it is kept it turns to a dark brown colour." The great variation in colour of the species in this genus may therefore probably occur after death. The same author, speaking of this insect, says "It leaps from bush to bush in the savannas." The word "flies" should be substituted here for "leaps."

A. *Lateral angles of pronotum produced or cornuted; apical angles of sixth segment of abdomen more or less acutely produced.*

a. *Apices of lateral angles of pronotum more or less distinctly rounded, obtuse, and recurved.*

1. **Edessa laticornis.** (Tab. VIII. fig. 9.)

Edessa laticornis, Stål, En. Hem. ii. p. 50. 5[1].

Hab. Mexico, Vera Cruz[1].

The specimen figured is in the collection of the Stockholm Museum.

α. *Scutellum and corium equal or subequal in length.*

2. **Edessa costalis.** (Tab. VIII. fig. 10.)

Edessa costalis, Stål, Enr. Hem. ii. p. 50. 7[1].

Hab. Mexico (*coll. Sign.*); Nicaragua, Chontales (*coll. Dist.*).—Colombia, Bogota[1] (*coll. Dist.*).

The specimen figured is from Nicaragua. The Mexican specimen in the collection of Dr. Signoret is a variety in which the pronotal horns are somewhat more slender and a little less produced.

3. **Edessa taurina.** (Tab. VIII. fig. 11.)

Edessa taurina, Stål, Stett. ent. Zeit. xxiii. p. 109. 25[1]; En. Hem. ii. p. 51. 8[2].

Hab. Mexico [1 2]; Guatemala, Sabo and Teleman, Vera Paz (*Champion*).

A Mexican typical specimen is figured from the Stockholm Museum. The two Guatemalan specimens examined are much smaller in size, and green in colour instead of luteous; but, as observed before, little reliance can be placed upon these colour-changes, which probably occur after death.

4. **Edessa hædina.** (Tab. VIII. fig. 15.)

Edessa hædina, Stål, Stett. ent. Zeit. xxiii. p. 112. 99[1]; En. Hem. ii. p. 52. 19[2].

Hab. Mexico, Vera Cruz [1 2].

The specimen figured is typical and in the collection of the Stockholm Museum, for the loan of which and many other types of this genus I am much indebted to Prof. Lindström.

β. Scutellum not reaching apex of corium.

5. **Edessa jugata.** (Tab. VIII. fig. 13.)

Edessa jugata, Hope, Cat. i. p. 28; Stål, En. Hem. ii. p. 59. 76.
Edessa arietina, Stål, Stett. ent. Zeit. xxiii. p. 110. 97[1]; En. Hem. ii. p. 52. 18[2].

Hab. Mexico [1 2]; Guatemala, San Juan, Vera Paz (*Champion*); Panama (*Boucard*).—Colombia [2], Bogota [2].

The specimen figured is from Mexico. I have compared a typical specimen received from Stockholm with Hope's type at Oxford, and satisfied myself that they belong to one species.

6. **Edessa ventralis.** (Tab. VIII. fig. 12.)

Edessa ventralis, Walk. Cat. Het. iii. p. 443. 113[1].

Hab. Guatemala [1], Balheu, Vera Paz (*Champion*).

7. **Edessa olivacea.** (Tab. VIII. fig. 14.)

Edessa olivacea, Stål, Stett. ent. Zeit. xxiii. p. 111. 98[1]; En. Hem. ii. p. 53. 22[2].
Edessa euchroma, Walk. Cat. Het. iii. p. 422. 22[3].

Hab. Mexico [1 2], Vera Cruz [3].

The specimen figured is a typical one from the Stockholm Museum.

8. **Edessa nigricornis.** (Tab. VIII. fig. 16.)

Edessa nigricornis, Stål, Stett. ent. Zeit. xxiii. p. 110. 96[1]; En. Hem. ii. p. 53. 25[2].

Hab. Mexico [1 2].

The figure is taken from a typical specimen, from the Stockholm Museum.

9. **Edessa fuscidorsata.** (Tab. IX. fig. 3.)

Edessa fuscidorsata, Reuter, in litt.

Olivaceous. Head, pronotum, and scutellum sparingly but strongly punctate; corium more finely and densely punctate. Antennæ stramineous; second and third joints subequal, or the second a little shorter than the third; fourth and fifth subequal. Pronotal lateral angles strongly produced, obtusely rounded, and slightly recurved at apices, which are black. Abdomen above fuscous. Connexivum with a large yellow spot on the centre of the margin of each segment. Underside of body and legs dull castaneous. Prosternum, mesosternum, and metasternum with a transverse central streak and segmental incisures black; margins of abdomen spotted with yellow as above.

Long. 18 millim., lat. pronot. ang. 13 millim.

Hab. PANAMA (*Boucard*).—COLOMBIA (*coll. Sign., Mus. Holm.*).

The specimen here figured and described is a little smaller, and has the pronotal angles somewhat less produced, than a typical specimen forwarded to me from the Stockholm Museum, labelled *E. fuscidorsata*, Reuter, *in litt.* I have since learned from Dr. Reuter that his description of this species will appear in a forthcoming number of the 'Entomologist's Monthly Magazine.'

10. **Edessa phœnicopus.** (Tab. IX. fig. 2.)

Edessa phœnicopus, Dallas, List Hem. i. p. 323. 10[1]; Stål, En. Hem. ii. p. 60. 100.

Hab. HONDURAS[1].

The figure is from the type and only specimen in the British Museum.

B. *Apices of lateral angles of pronotum more or less acute or subacute.*

α. *Lateral angles of pronotum robust, apices very slightly recurved.*

11. **Edessa leucogramma.**

Pentatoma leucogramma, Perty, Delect. Animal. Artic. p. 167, t. 33. f. 9[1].

Edessa maculata, Dall. List Hem. i. p. 322. 8[2].

Edessa leucogramma, Stål, En. Hem. ii. p. 54. 28[3].

Hab. PANAMA (*Boucard*).—BRAZIL[1 2 3].

12. **Edessa salvini,** n. sp. (Tab. IX. fig. 4.)

Head, pronotum, and scutellum yellow with a greenish tinge. Head with the base of the central lobe and the apical half of the lateral lobes transversely striated. Antennæ luteous, with the basal joint greenish, second joint a little longer than the third, fifth a little shorter than fourth, which is much the longest. Pronotum sparingly punctate, and with a faint central pale longitudinal line; anterior portion obscurely and transversely wrinkled, verrucose near anterior margin; lateral submargins faintly transversely striated; lateral angles prominently and subacutely produced; apices ochraceous, very slightly pointed and recurved. Scutellum with a pale central longitudinal line, somewhat densely punctured on disk, more sparingly so on lateral margins. Corium pale greenish, with the nervures somewhat paler, finely and

thickly punctate; basal costal margin yellewish. Membrane obscure hyaline. Upper surface of abdomen pale testaceous. Body beneath and legs pale yellowish with a greenish tinge; tarsi testaceous; segmental incisures and a longitudinal series of transverse linear impressions situated near stigmata somewhat darker and greener.

Long. 15 millim., lat. pronot. ang. $10\frac{1}{2}$ millim.

Hab. Costa Rica (*Mus. Berol.*; *coll. Dist.*), Caché, Irazu (*Rogers*).

This species, judging from Stål's description, would seem to be closely allied to *E. sahlbergii* of that author; the different colour of the abdomen above, and the relative lengths of the second and third joints of the antennæ, are sufficient, however, to separate the two forms.

This species also appears to be confined to Costa Rica, one specimen in my own collection, another in the Berlin Museum, and two sent home by Mr. Rogers being the only examples I have seen. Mr. Champion has not hitherto met with it in Guatemala; nor have I seen it in any collection from Panama.

13. **Edessa reticulata.** (Tab. VIII. fig. 17.)

Edessa reticulata, Dallas, List Hem. i. p. 325. 14[1]; Stål, En. Hem. ii. p. 54. 31[2].
Edessa lineosa, Walker, Cat. Het. iii. p. 422. 21[3].

Hab. Mexico[1 2] (*Mus. Holm.*, *Mus. Berol.*), Oaxaca (*coll. Dist.*), Orizaba[3], Vera Cruz[2].

A Mexican specimen is figured. The length of the pronotal angles is somewhat variable.

β. Lateral angles of pronotum with the apices acute and strongly recurved.

14. **Edessa nigrispina.** (Tab. VIII. fig. 18.)

Edessa nigrispina, Dallas, List Hem. i. p. 326. 16[1]; Stål, En. Hem. ii. p. 54. 32[2].
Edessa bos, Stål, Öfv. Vet.-Ak. Förh. 1855, p. 183. 3; ib. 1856, p. 62. 3.
Edessa nigridens, Walk. Cat. Het. iii. p. 426 (nec Fabr. & H.-Sch.)[3].

Hab. Mexico[1 2] (*Mus. Holm.*); Honduras[1 2 3].—Antilles (*coll. Dist.*).

In the Antillean specimens of my collection the colour of the pronotum and scutellum is green, and not ochraceous, as in the Mexican specimen figured.

15. **Edessa bonasia.** (Tab. VIII. fig. 19.)

Edessa bonasia, Stål, En. Hem. ii. p. 54. 33[1].

Hab. Mexico, Vera Cruz[1].

The specimen figured is a typical Mexican one, contained in the collection of the Stockholm Museum.

B. *Lateral angles of pronotum prominent or subprominent, not angularly produced nor cornuted.*

A. *Apical angles of sixth segment of abdomen more or less acutely produced.*

16. **Edessa præcellens.** (Tab. IX. fig. 1.)

Edessa præcellens, Stål, Stett. ent. Zeit. xxiii. p. 112. 102[1]; En. Hem. ii. p. 61. 110.

Hab. Mexico[1].

The specimen figured is a typical one, in the collection of Dr. Signoret.

17. **Edessa montezuma,** n. sp. (Tab. IX. fig. 6.)

Pale olivaceous. Head sparingly punctate. Antennæ ochraceous; second joint a little shorter than the third; fourth and fifth much the longest, and subequal in length. Pronotum sparingly punctate; a transverse impunctate verrucose space near anterior margin; anterior and lateral margins strongly defined, with deep punctures; lateral angles moderately and subacutely produced; apices ochraceous, and very slightly recurved. Scutellum with the disk sparingly punctate; apical half more densely punctate, with a central pale almost impunctate line. Corium thickly and coarsely punctate, with the costal margin and nervures paler in colour. Membrane pale hyaline. Abdomen above testaceous. Body beneath and legs pale ochraceous; tarsal claws pitchy.

Long. 14½ millim., lat. pronot. ang. 10 millim.

Hab. Mexico, Ocaña (*coll. Signoret*).

This species in some respects is allied to *E. junix*, Stål; but the produced lateral angles of the pronotum will at once distinguish it.

18. **Edessa lindströmi,** n. sp. (Tab. IX. fig. 5.)

Ochraceous with green suffusions. Head with the margins of the lateral lobes transversely striate. Antennæ ochraceous; second joint a little shorter than the third, remainder mutilated. Pronotum sparingly covered with deep pitchy punctures; a greenish patch at base; and lateral angles subacutely produced. Scutellum sparingly covered with deep pitchy punctures, becoming finer and more dense towards apex, which is greenish. Corium greenish, thickly and finely punctured; membrane pale hyaline. Abdomen above pitchy testaceous. Body beneath and legs luteous.

Long. 14½ millim., lat. pronot. ang. 9 millim.

Hab. Mexico (*Mus. Holm.*).

Allied to the preceding species, but differs in having the pronotal angles less acutely produced, and the punctuation also different.

19. **Edessa quadridens.**

Edessa quadridens, Fabr. Syst. Rhyn. p. 148. 13; Dall. List Hem. i. p. 329. 24[1]; Stål, Hem. Fabr. i. p. 36. 4; En. Hem. ii. p. 55. 38[2]; Stoll, Pun. f. 137, et tab. 25. f. B.

Pentatoma luteicornis, St.-Farg. et Serv. Enc. Méth. x. p. 55. 10.
Edessa luteicornis, Dall. List Hem. i. p. 329. 23[3].
Edessa schæfferi, Hahn, Wanz. Ins. ii. p. 127, f. 207[4].
Hypoxys quadridens, A. & S. Hist. des Hém. p. 157. 1[5].
Edessa brunnipes, Fabr. Syst. Rhyn. p. 148. 12.

Hab. PANAMA (*Boucard*).—COLOMBIA[2]; VENEZUELA[3]; GUIANA, Demerara[1] (*coll. Dist.*), Cayenne[2 5]; BRAZIL[2 4], Ega, Amazons (*coll. Dist.*).

This is a variable species in coloration. Stål has thus well pointed this out:—"Thorax inter angulos laterales fascia nigra sæpissime notatus, his angulis nigris vel concoloribus. Dorsum abdominis flavescens vel violaceo-testaceum, lateribus interdum nigris. Connexivum nigro-fasciatum vel impictum."

20. **Edessa jurgiosa.** (Tab. IX. fig. 7.)

Edessa jurgiosa, Stål, Stett. ent. Zeit. xxiii. p. 114. 105[1]; En. Hem. ii. p. 61. 111.

Hab. MEXICO[1].

The typical specimen figured is in the collection of Dr. Signoret.

21. **Edessa junix.** (Tab. VIII. fig. 20.)

Edessa junix, Stål, Stett. ent. Zeit. xxiii. p. 114. 106[1]; En. Hem. ii. p. 56. 43[2].

Hab. MEXICO[1 2].

The specimen figured is in the Stockholm Museum.

22. **Edessa affinis.** (Tab. IX. fig. 17.)

Edessa affinis, Dall. List Hem. i. p. 332. 33[1]; Stål, En. Hem. ii. p. 56. 45[2].

Hab. BRITISH HONDURAS, Sarstoon (*Blancaneaux*); GUATEMALA, San Gerónimo, Panimá, Tamahu (*Champion*).—COLOMBIA[1], Bogotá (*coll. Dist.*); BRAZIL[1 2], Rio Janeiro[2].

The colour in this species varies from green to ochraceous; it is probable that the first is normal and the second occasional discoloration after death. Such a melanic specimen from Guatemala is here figured.

23. **Edessa vinula.** (Tab. IX. fig. 13.)

Edessa vinula, Stål, Stett. ent. Zeit. xxiii. p. 115. 108[1]; En. Hem. ii. p. 56. 46[2].

Hab. MEXICO[1 2]; GUATEMALA, Zapote, San Joaquin, Senahu (*Champion*).

A Mexican specimen is figured, which is in the Stockholm Museum, and was considerately lent me from there for that purpose.

24. **Edessa stålii,** n. sp. (Tab. IX. fig. 14.)

Head pale green, very faintly and transversely striate. Antennæ pitchy; basal portion of first joint suffused with greenish; bases of third, fourth, and fifth joints creamy white, the white increasing with the number of the joints; second joint longer than third; fourth and fifth subequal. Pronotum green, very faintly and sparingly punctate; lateral margins luteous, lateral angles subprominent. Scutellum green, base obscurely wrinkled and punctured. Corium ochraceous with a greenish tinge, obscurely punctured with two parallel subclaval rows of strongly marked punctures. Membrane obscure hyaline, pitchy at base. Connexivum green, with the outer margin narrowly luteous. Underside of body and legs pale yellowish green; lateral margins of sternum and extreme margin of connexivum luteous.

Long. 13½ millim., lat. pronot. ang. 7½ millim.

Hab. Costa Rica, Irazu (*Rogers*).

I have seen but one specimen of this species, which I forwarded for comparison to the late Prof. Stål, who replied to me "*E. vinulæ* affinis, sed distincta videtur." I have since, through the kindness of Prof. Lindström, been enabled to compare it myself with a typical specimen of *E. vinula*, and find the following differential characters between the two:—*E. stålii* is less elongate in form; the corium is without the "callo lævi pone medium;" and the second joint of the antennæ is longer than the third.

25. **Edessa lepida.** (Tab. IX. fig. 12.)

Edessa lepida, Stål, Stett. ent. Zeit. xxiii. p. 116. 109[1]; En. Hem. ii. p. 61. 112.

Hab. Mexico [1].

The specimen figured is in the collection of Dr. Signoret.

26. **Edessa rixosa.** (Tab. IX. fig. 16.)

Edessa rixosa, Stål, Stett. ent. Zeit. xxiii. p. 116. 110[1]; En. Hem. ii. p. 56. 47[2].

Hab. Mexico [1 2]; Guatemala, San Juan and Lanquin (*Champion*).

A Mexican specimen is figured, which was lent me for that purpose from the Stockholm Museum.

Var. **cortesi.** (Tab. IX. fig. 9.)

Head ochraceous; lateral lobes transversely striated. Antennæ ochraceous, second joint a little shorter than the third, remainder wanting. Pronotum green, with the anterior portion and the greater part of the lateral borders ochraceous, moderately punctate; anterior margin transversely costate and impunctate; lateral angles moderately prominent, slightly recurved. Scutellum with the basal half occupied by a large irregular ochraceous patch, which is sparingly and somewhat obscurely punctate; apical half green, and much more finely and densely punctate. Corium testaceous, thickly and finely punctate; base of costal margin pitchy; a somewhat levigate spot on disk, about one third from apical margin. Membrane obscure hyaline, fuscous at base and along costal margin. Abdomen above shining green, testaceous towards apex. Underside of body and legs pale ochraceous.

Long. 17 millim., lat. pronot. ang. 9 millim.

Hab. Mexico (*Mus. Holm.*).

This variety is closely allied to the preceding (*E. rixosa*, Stål); but, besides its much larger size, it differs also in the different colour (darker and brighter) of the abdomen above, the slightly more recurved apices of the pronotal lateral angles, the different colour of the corium, with the base of the costa pitchy, &c. Different as it is, however, in colour and size, I can find no structural characters to lead me to consider that it is any thing more than a strongly marked variety of *E. rixosa*; but as I have only seen one specimen, and that has the antennæ mutilated, which if perfect might give some decisive character, I have considered it better to give it provisionally a distinct varietal name.

27. **Edessa puncticornis.** (Tab. IX. fig. 11.)

Edessa puncticornis, Stål, Stett. ent. Zeit. xxiii. p. 115. 107[1]; En. Hem. ii. p. 56. 48[2].

Hab. Mexico [1 2] (*Mus. Berol.*), Oaxaca [2].

A typical specimen in the Stockholm Museum is here figured. Two other Mexican specimens of this species which I have examined, belonging to the collection of the Berlin Museum, are slightly larger, and have the corium somewhat darker in colour.

28. **Edessa punctiventris.** (Tab. IX. fig. 15.)

Edessa punctiventris, Stål, En. Hem. ii. p. 59. 68[1].

Hab. Mexico [1] (*Mus. Berol.*).

The figure is from a typical specimen in the Stockholm Museum. The specimen which I examined from the Berlin Museum is of an almost uniform luteous colour.

29. **Edessa trifurca.** (Tab. IX. fig. 10.)

Edessa trifurca, Walk. Cat. Het. iii. p. 423. 23[1].

Hab. Mexico (*Mus Berol.*), Orizaba [1].

The figure is from the type in the British Museum.

30. **Edessa pudica.** (Tab. IX. fig. 8.)

Edessa pudica, Stål, Stett. ent. Zeit. xxiii. p. 116. 111[1]; En. Hem i. p. 61. 113.

Hab. Mexico [1].

A Mexican and typical specimen from the collection of Dr. Signoret is here figured.

31. **Edessa patricia.** (Tab. VIII. fig. 22.)

Edessa patricia, Stål, Stett. ent. Zeit. xxiii. p. 114. 104[1]; En. Hem. ii. p. 57. 51[2].

Hab. Mexico [1 2]; Guatemala, Teleman (*Champion*).

A Mexican specimen is figured.

32. **Edessa irrorata.** (Tab. VIII. fig. 21.)

Edessa irrorata, Dallas, List Hem. i. p. 331. 28[1]; Stål, En. Hem. ii. p. 57. 53[2].

Hab. PANAMA, Colon (*Boucard*).—COLOMBIA[1], Bogotá[2].

The figure is from a single specimen from Panama, received through M. Boucard.

33. **Edessa collaris.** (Tab. VIII. fig. 23.)

Edessa collaris, Dall. List Hem. i. p. 329. 25[1]; Stål. En. Hem. ii. p. 60. 104.
Edessa lineigera, Stål, Stett. ent. Zeit. xxiii. p. 113. 103[2]; En. Hem. ii. p. 57. 54[3].

Hab. MEXICO[2 3].—BRITISH GUIANA[1]; BRAZIL[1].

A Mexican specimen is figured. Having received a type of *E. lineigera* from the Stockholm Museum, I was enabled to compare it with Dallas's type in the British Museum, and satisfy myself as to their specific identity.

34. **Edessa picticornis.** (Tab. IX. fig. 18.)

Edessa picticornis, Stål, En. Hem. ii. p. 58. 66[1].

Hab. MEXICO (*coll. Sallé*), Oaxaca[1].

35. **Edessa mexicana.** (Tab. VIII. fig. 2.)

Edessa mexicana, Stål, En. Hem. ii. p. 59. 67[1].

Hab. MEXICO (*Mus. Berol.*), Oaxaca[1].

The specimen figured is contained in the Berlin Museum, and differs in the brighter and more luteous coloration of the upper surface from ordinary and typical specimens, one of which, from the Stockholm Museum, I have had the privilege to receive for examination.

36. **Edessa unicolor,** n. sp. (Tab. X. fig. 3.)

Pale ochraceous, thickly and finely punctured. Antennæ long; second joint very much shorter than third, fourth and fifth longest and subequal. Scutellum elongate, apical portion sulcated, apex subacute, membrane concolorous. Abdomen above and body beneath and legs somewhat paler in hue.
Long. 13 millim., lat. pronot. ang. 7 millim.

Hab. GUATEMALA, Cubilguitz (*Champion*).

Allied in general facies to *E. mexicana,* Stål, but differs not only in the pale uniform colour (contrasting especially in that of the upper surface of the abdomen) and absence of dark punctures, but also in having the second joint of the antennæ much shorter than the third, and by the much more elongated scutellum.

37. **Edessa pudibunda.** (Tab. IX. fig. 20.)

Edessa pudibunda, Stål, Stett. ent. Zeit. xxiii. p. 117. 114[1]; En. Hem. ii. p. 61. 114.

Hab. Mexico[1]; Guatemala, Capetillo (*Champion*); Costa Rica, Irazu (*Rogers*).

A Mexican specimen, lent to me by Dr. Signoret as typical, is the one figured.

38. **Edessa godmani,** n. sp. (Tab. IX. fig. 19.)

Pale greenish testaceous, thickly and strongly punctate. Antennæ concolorous, spotted with fuscous, and obscurely pilose, with the second joint distinctly shorter than the third; fourth and fifth subequal in length, base of fifth joint pale luteous. Pronotal angles subprominent; apex of scutellum broadly levigate, shining creamy white; membrane æneous. Body beneath and legs spotted and punctured with fuscous. Abdomen above pitchy black.

Long. 11 millim., lat. pronot. ang. 6 millim.

Hab. Guatemala, Capetillo (*Champion*).

Allied to *E. pudibunda*, Stål, from which it differs in the following characters—the more linear body, sides of scutellum straighter and less sinuated, second joint of antennæ shorter than the third, and the much closer and coarser punctuation.

B. *Apical angles of sixth segment of abdomen not acutely produced.*

39. **Edessa rufomarginata.**

Cimex rufo-marginatus, De Geer, Mém. iii. p. 330. 3, t. 34. fig. 3.

Cimex cruentus, Fabr. Syst. Ent. p. 713. 78; Goeze, Ent. Beitr. ii. p. 247. 16; Fabr. Spec. Ins. ii. p. 356. 109; Mant. ii. p. 293. 141; Gmel. Syst. Nat. i. 4, p. 2151. 297; Fabr. Ent. Syst. iv. p. 115. 135.

Edessa cruenta, Fabr. Syst. Rhynch. p. 153. 31[1]; Hahn, Wanz. Ins. ii. p. 125, f. 205[2]; Burm. Handb. ii. 1, p. 355. 9[3]; Blanch. Hist. iii. p. 144. 5; Hém. t. 7. f. 1; Stål, Sett. ent. Zeit. xxiii. p. 117. 112[4].

Pentatoma furcata, Palisot Beauv. Ins. p. 46, Hém. t. 6. f. 1 et 2[5].

Pentatoma cruenta, St.-Farg. & Serv. Enc. Méth. x. p. 55. 11.

Aceratodes cruentus, A. & S. Hist. des Hém. p. 160. 1[6]; Dall. List Hem. i. p. 334. 1[7].

Aceratodes discolor, Dall. List Hem. i. p. 334. 2[8].

Stoll, Pun. f. 113 et 193.

Var. *b*.

Stoll, Pun. f. 42.

Var. *c*.

Aceratodes marginalis, Dall. List Hem. i. p. 335. 5[9].

Aceratodes albomarginatus, Stål, Öfv. Vet.-Ak. Förh. 1855, p. 183. 2, et loc. cit 1856, p. 62. 2.

Aceratodes flavomarginatus, Stål, Öfv. Vet.-Ak. Förh. 1855, p. 183. 3, et loc. cit. 1856, p. 63. 3.

Var. *d*.

Aceratodes flavovirens, Stål, Öfv. Vet.-Ak. Förh. 1855, p. 183. 1, et loc. cit. 1856, p. 62. 1.

Edessa rufo-marginatus, Stål, En. Hem. ii. p. 57. 56[10]; Berg, Hemip. Argent. p. 61. 75[11].

Hab. Mexico[4 7 10], Oaxaca (*Mus. Berol.*); British Honduras[7], Belize, river Sarstoon

(*Blancaneaux*); GUATEMALA, Capetillo, Teleman, Panzos (*Champion*); NICARAGUA, Chontales (*coll. Dist.*); COSTA RICA (*Van Patten*); PANAMA (*coll. Dist.*, *Boucard*).—SOUTH AMERICA[9]; COLOMBIA[7 10]; GUIANA, Demerara[7 8], Cayenne[6 7], Surinam[1 10]. BRAZIL[2 7 10], Pará[3], Bahia[3]; ARGENTINE REPUBLIC[11], Buenos Ayres[10], Monte Video[10].

Most of the varietal forms of this species have been received from Central America.

40. **Edessa cornuta.** (Tab. IX. fig. 22.)

Edessa cornuta, Burm. Handb. ii. 1, p. 356. 10[1].

Edessa corculum, Erichs. in Schomb. Reis. iii. p. 610[2]; Stål, En. Hem. ii. p. 58. 62[3] (excl. syn. *Aceratodes sigillatus,* Walk.).

Hab. MEXICO[1 3] (*Mus. Berol.*); GUATEMALA, Zapote, San Gerónimo (*Champion*); COSTA RICA (*Van Patten*), Rio Sucio (*Rogers*); PANAMA (*coll. Dist.*).—COLOMBIA, Bogotá (*coll. Dist.*); GUIANA[2], Dèmerara (*coll. Dist.*); BRAZIL[3], Para[1], Bahia[3].

Stål[3] erroneously considered *E. sigillatus*, Walk., a synonym of this species. A Mexican specimen thus labelled, received from the Stockholm Museum, is here figured. I cannot agree with Stål in following Erichson as regards the substitution of the name *corculum* for *cornuta*. It is quite clear that Klug first proposed the name *cornuta*, and that it was by this author a MS. one only. Burmeister used Klug's name, and gave a diagnosis, thus fixing the species, and hence the name also. Erichson appears merely to have substituted another MS. name; for in Schomb. Reis. iii. p. 610, the species appears as *E. corculum*, Hoffgg. (i. mus.)—*E. cornuta*, Burm., and *E. albirenis*, H.-S., being given as synonyms. But, as Graf von Hoffmansegg, so far as I can discover, never published a description, the name *E. cornuta*, Burm., though inapplicable to the structure of the insect, must stand; and as it was published in 1835, the species described by Dallas under the same name in 1851 must change also. For this I propose the name *E. dallasi.*

41. **Edessa cordifera.** (Tab. IX. fig. 23.)

Aceratodes cordifer, Walk. Cat. Het. iii. p. 452. 5[1].

Edessa albicors, Stål, En. Hem. ii. p. 58. 63[2].

Hab. MEXICO[2], Oaxaca[1] (*coll. Dist.*).

A Mexican specimen in the Stockholm Museum is here figured. Stål substituted the name *albicors* for this species without any explanation. It is probable that he did so owing to the name *cordigera* having been used by Erichson. However, the names though similar are not identical, and I do not consider any rules have been formulated to allow such a change to be made on such grounds. Moreover, no writer appears conversant with Erichson's species; and should it be proved ultimately to be a synonym only, then Walker's title would have to be resuscitated.

42. **Edessa sigillata.** (Tab. IX. fig. 24.)

Aceratodes sigillatus, Walk. Cat. Het. iii. p. 452. 4[1].
Aceratodes denotata, Germ. MSS.[2]

Hab. MEXICO [2] (*Mus. Holm.*), Orizaba, Oaxaca [1].

The specimen figured is in the Stockholm Museum, and was forwarded to me for identification. It is at once differentiated from the two preceding species by the much broader scutellum. A Mexican specimen, labelled *denotata*, Germ. (in MSS.), coll. Spinola, was sent to me by Dr. Signoret.

43. **Edessa conspersa.** (Tab. VIII. fig. 24.)

Edessa conspersa, Stål, En. Hem. ii. p. 58. 64[1].

Hab. MEXICO, Oaxaca [1]; GUATEMALA, San Gerónimo (*Champion*).

A typical Mexican specimen is figured, which was lent me for that purpose by the Stockholm Museum.

44. **Edessa championi,** n. sp. (Tab. IX. fig. 21.)

Castaneous, irrorated with luteous, subrugulose and densely punctate. Antennæ luteous, thickly spotted with fuscous, obscurely pilose, with the second joint considerably shorter than the third, fourth longest, fifth about subequal in length to the third and fuscous, with the base and apex luteous, fourth also with the base narrowly luteous; pronotal angles subprominent; scutellum with the apical portion faintly and obscurely sulcated. Membrane æneous. Underside of body and legs somewhat paler than the upper surface.
Long. 14 millim., lat. pronot. ang. 8 millim.

Hab. GUATEMALA, San Juan (*Champion*).

Allied to *E. conspersa*, Stål, but differs in having the lateral borders of the pronotum more convex, and the apical portion of the scutellum much narrower and obscurely furrowed; the colour and markings are very distinct.

45. **Edessa petersii,** n. sp. (Tab. IX. fig. 25.)

Edessa discors, Erichs. in Schomb. Reis. iii. p. 611 ??.

Head, pronotum, and scutellum bright castaneous; corium pitchy castaneous; pronotum and scutellum sparingly but coarsely punctate; corium rugulose and finely punctate. Antennæ pale castaneous; second joint a little longer than the third; fourth and fifth subequal. Pronotum with the lateral margins narrowly bright castaneous, and the lateral angles subprominent. Membrane pale æneous. Underside of the body pale luteous; lateral borders of the sternum very bright castaneous. Abdomen with five castaneous longitudinal fasciæ, one central, two discal, and two submarginal (the last sometimes very indistinct). Legs pale bright castaneous.
Long. 13 millim., lat. pronot. ang. 8 millim.

Hab. MEXICO (*Mus. Berol.*); GUATEMALA, San Gerónimo (*Champion*).

A Guatemalan specimen is figured, which agrees with several others from the same locality in being somewhat darker in hue than a Mexican specimen contained in the

Berlin Museum. This last form also varies in having the anterior and lateral borders of the pronotum broadly luteous; and the underside is also brighter than in the Guatemalan examples.

This species corresponds in many respects with Erichson's description of *E. discors*, but I have been unable to fully identify it. The words "das Halsschild mit schmalem gelben Seitenrande," and "Die Unterseite röthlich gelb, mit feinem dunklen Querstreifen," together with the fact that Erichson placed this species before his *E. abdominalis*, where I also naturally included it before consulting that author's work, are evidence in the affirmative for its being *E. discors*. On the other hand, as these characters are so loosely worded, and no size is given but "von der Grösse der *A. meditabunda*," which does not quite apply, I have thought it best, not having seen the type, and no other author, as far as I am aware, having recognized this species, to give, somewhat doubtingly, a new specific name, referring at the same time to Erichson's description.

46. **Edessa abdominalis.** (Tab. X. fig. 2.)

Edessa abdominalis, Erichs. in Schomb. Reis. iii. p. 611[1].

Ochreous, punctured and suffused with fuscous. Head pale ochraceous, with the lateral lobes transversely striated, punctured with fuscous, and their disks pale sanguineous. Pronotum pale ochraceous, darker towards base, sparingly covered with dark punctures, the lateral margins narrowly sanguineous. Scutellum ochraceous, finely and densely punctate; punctures fuscous, and mostly confluent. Corium dark, obscure ochraceous, thickly and finely punctate, with the base of costal margin pale sanguineous. Membrane æneous. Abdomen above pitchy; connexivum pale sanguineous. Underside of sternum and abdomen sanguineous, finely, darkly, and rather thickly punctate. Head beneath and legs pale ochraceous.

Long. 12½ millim., lat. pronot. ang. 7½ millim.

Hab. MEXICO, Oaxaca (*Mus. Berol.*).—BRITISH GUIANA[1].

Closely allied to the preceding species, but not only instantly separated by the colour of the abdomen beneath, but structurally by the scutellum, which not only differs greatly in its punctuation, but is also much more deeply sinuated before the apical third portion, which has its lateral margins much more convex.

Erichson's description is very vague; he gives no dimensions, but describes the species as "Grösse und Form der vorigen," which was his *E. discors*, and which, as before mentioned, he represents as "von der Grösse der *A. meditabunda*." This gives an approximate idea; and "Das Halsschild mit feinem gelben Seitenrande," and "Der Hinterleib einfarbig roth," are such well-marked characters that I feel little doubt in the identification. "Die Oberseite hellgrün" refers probably to a fresh specimen.

47. **Edessa privata.** (*E. westringii*, Tab. VIII. fig. 25.)

Aceratodes privatus, Walk. Cat. Het. iii. p. 453. 6[1].

Edessa westringii, Stål, En. Hem. ii. p. 58. 65[2].

Hab. MEXICO, Oaxaca[1 2].

The specimen figured is in the Stockholm Museum, and was forwarded to me as a typical specimen of *E. westringii*, Stål. I have compared the same with the type of *Aceratodes privatus*, and find both to be identical. Walker's name, therefore, takes precedence.

OLBIA.

Olbia, Stål, Stett. ent. Zeit. xxiii. p. 118 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 532.

Olbia differs principally and strikingly from the preceding genus in having the posterior angles of the pronotum acutely produced.

Only two species of this genus are at present recorded, both Neotropical, one of which is included in this fauna.

1. Olbia caprina. (Tab. X. fig. 4.)

Olbia caprina, Stål, Stett. ent. Zeit. xxiii. p. 118. 115[1]; En. Hem. ii. p. 61. 2[2].

Hab. Mexico[1 2]; Brazil (*coll. Signoret*).

The figure is from a typical specimen forwarded to me by Dr. Signoret.

Subfam. *ACANTHOSOMINÆ*.

Acanthosomina, Stål, Hem. Africana, i. p. 33 (1864).

Only one species of this subfamily having as yet been received or recorded from Central America, it is scarcely necessary to make much numerical comparison of either genera or species. Computing, however, in a general manner, according to present knowledge, the Acanthosominæ of the Nearctic and Neotropical Regions comprise about three fourths the number of genera, and two fifths the number of species, of those recorded in the same subfamily from Africa, Asia, and Australia.

ACANTHOSOMA.

Acanthosoma, Curtis, Brit. Ent. i. p. 28 (1824); Dallas, List Hem. i. p. 198 (1851); Stål, En. Hem. v. p. 110.

This genus being the only one known to represent the subfamily in Central America, the two-jointed tarsi, a character peculiar to the whole of the Acanthosominæ, will at once distinguish it. It is common to the Nearctic, Palæarctic, and Oriental Regions. Of the American species all are Nearctic, one of which, here enumerated, has also been received from Mexico.

It is of the European species *A. griseum*, Burm., that Westwood, quoting De Geer in his 'Mémoires,' gave the interesting description of the females, accompanied by their respective broods, each consisting of from twenty to forty young, which they attended with as much care as a hen does her brood of chickens. In this county Mr. Hellings, of Exeter, in 1871 (Ent. Month. Mag. vol. ix. p. 13) "observed a female on a birch tree

on the 6th of June laying eggs; over these she brooded without moving till the 29th, when the young bugs were hatched. On July 9th they moulted, and on the 13th began to move off their native leaf." According to Townend Glover, the only species here included (*A. laterale*, Say) is considered by Prof. Uhler to be the North-American representative of the above.

1. **Acanthosoma laterale.** (Tab. X. fig. 5.)

Edessa lateralis, Say, New Harm. Ind., Dec. 1831; Compl. Writ. i. p. 312. 2 [1].

Edessa nebulosa, Kirby in Richards. Faun. Bor.-Am. Ins. p. 277. 1 [2]; Bethune, Can. Ent. vol. x. p. 138.

Acanthosoma nebulosum, Dall. List Hem. i. p. 307. 12 [3].

Elasmostethus nebulosus ?, Stål, Stett. ent. Zeit. xxiii. p. 109. 94 [4].

Acanthosoma lateralis, Stål, En. Hem. ii. p. 61. 2; Town. Glover, Ill. Ins. Ord. Hem. p. 21.

Acanthosoma nebulosa, Stål, En. Hem. ii. p. 61. 5.

Acanthosoma laterale, Uhler, Proc. Bost. Soc. Nat. Hist. vol. xix. p. 381 [5].

Hab. North America [1 2 3 5].—Mexico [4] (*coll. Sign.*).

Uhler [5] states that this species is widely distributed in Canada, British America, and the Northern States. The specimen figured is from Mexico, and is in the collection of Dr. Signoret, who enabled me to compare it with the North-American specimens in the British Museum, which have been identified by Mr. Dallas as *A. nebulosum*. It does not differ in any respect from these; and I agree with Prof. Uhler in considering Kirby's name a synonym only of Say's *A. laterale*.

Subfam. *TESSARATOMINÆ*.

Tessaratomina, Stål, Hem. Africana, i. p. 33 (1864).

The insects comprising this subfamily are found principally in the Ethiopian, Oriental, and Australian Regions, and are also there found in their largest size and most representative forms. The Tessaratominæ form a very small addition to the Pentatomidæ of the Nearctic and Neotropical Regions.

PIEZOSTERNUM.

Piezosternum, Amyot & Serville, Hist. des Hém. p. 161 (1843); Dall. List Hem. i. p. 317. 6 (1851); Stål, Hem. Afr. i. pp. 224 & 227 (1864); En. Hem. i. p. 63 (1870).

Salica, Walker, Cat. Het. iii. p. 469 (1868).

The principal structural characters of this genus are the sternal keel produced to the anterior coxæ, the posterior margin of the pronotum produced over the base of the scutellum, and the five-jointed antennæ.

One species is abundant in West Africa; another has lately been discovered in Madagascar; and three others are recorded from the Neotropical Region, of which one only has yet been found in Central America.

1. **Piezosternum subulatum.**

Cimex subulatus, Thunb. Nov. Ins. Spec. ii. p. 41, tab. 2. fig. 55; Dissertationes, iii. p. 161, tab. 8. fig. 11; Gmel. Syst. Nat. i. 4, p. 2146. 266.

Cimex vacca, Fabr. Ent. Syst. iv. p. 92. 51; Coq. Ill. Ins. ii. p. 81, tab. 19. fig. 2.

Cimex gazella, Fabr. Ent. Syst. iv. p. 92. 52.

Edessa gazella, Fabr. Syst. Rhynch. p. 147. 5[1].

Edessa vacca, Fabr. Syst. Rhynch. p. 147. 6.

Pentatoma mucronata, Palis. Beauv. Ins. p. 46, Hém. pl. 6. figs. 5 & 6[2]; St.-Farg. & Serv. Enc. Méth. x. p. 55. 12.

Piezosternum mucronatum, A. & S. Hist. des Hém. p. 162. 1[3].

Piezosternum subulatum, Dall. List Hem. i. p. 338. 2; Stål, Hem. Fabr. i. p. 40. 2; En. Hem. i. p. 64. 2[4].

Hab. MEXICO, Vera Cruz[4]; PANAMA, Chiriqui (*Boucard*).—ANTILLES, Cuba[4], St. Domingo, Martinique[1].—COLOMBIA, Bogotá (*coll. Dist.*); GUIANA, Demerara (*coll. Dist.*); BRAZIL, Pebas (*coll. Dist.*).

Amyot and Serville[3], in giving "Oware (Afrique)" as a locality for this species, have evidently confused it with *P. calidum*, Fabr. Considerable variation occurs in the apices of the lateral pronotal angles, which, though they may generally and correctly be described as subacute, are more or less developed in that direction in different specimens. From an examination of my own specimens I should incline to the opinion that these gradually become more acute towards the south.

PANTOCHLORA.

Pantochlora, Stål, En. Hem. i. p. 64 (1870).

The antennæ, as in the last genus, are five-jointed; but *Pantochlora* is at once separated from *Piezosternum* by the posterior margin of the pronotum not being produced over the base of the scutellum. But one species is known; and the genus seems to be confined to Central America.

1. **Pantochlora vivida.** (Tab. VIII. fig. 7.)

Pantochlora vivida, Stål, En. Hem. i. p. 65. 1[1].

Hab. MEXICO, Yucatan, Campeachy[1]; GUATEMALA, La Tinta, Panima and San Joaquin (*Champion*).

Subfam. *DINIDORINÆ.*

Dinidorina, Stål, En. Hem. i. p. 79 (1870).

Only one genus of this subfamily is found in America, and that in the Neotropical Region; the majority of the Dinidorinæ are found in the Old World, and are distributed much in the same way as the previous subfamily, Tessaratominæ.

DINIDOR.

Dinidor, Latreille, Règn. An. v. p. 195 (1829).
Dictyocoris, Mayr, Verh. zool.-bot. Ges. Wien, xiv. p. 913 (1864).
Cyclopelta, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 532; En. Hem. i. p. 79 (1870).

In this genus the antennæ are of four joints only, the scutellum broad and rounded at the apex, and the metasternum and abdomen unarmed. *Dinidor* is Neotropical in its habitat. Four species are recorded, of which one only is included here.

1. **Dinidor rufocinctus.** (Tab. X. fig. 6.)

Dinidor (*C.*) *rufo-cinctus*, Stål, En. Hem. i. p. 79. 2[1].

Hab. Panama (*coll. Dist.*).—Colombia, Bogotá[1], Medellin (*coll. Dist.*).

Apart from the colour-difference of the pronotum compared with that of *D. mactans*, I have not been able to separate the two species by the structural characters given by Stål. The length of the apical joint of the antennæ, however, is sufficient to divide them, being much shorter in *D. rufocinctus* than in *D. mactans*.

Fam. COREIDÆ.

Subfam. *MEROCORINÆ*.

Merocorina, Stål, En. Hem. i. p. 125 (1870).

This subfamily is confined to the Nearctic and Neotropical Regions. One genus is peculiar to Central America; and of the two others which are found in this region the majority of the species are Neotropical. Roughly computing, Central America in the Merocorinæ possesses about one fourth of the number of known genera, and about one fifth of the number of described species.

FLAVIUS.

Flavius, Stål, Stett. ent. Zeit. xxiii. p. 274 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 536; Hem. Fabr. i. p. 42 (1868).

The head is distinctly and somewhat prominently tuberculated beneath, and the mesosternum prominently elevated. This elevated portion is broadest at the base, where it is tuberculated on each side. The posterior tibiæ are broad. But one species is at present known to science:—

1. **Flavius lineaticornis.** (Tab. X. fig. 7 ♂, 8 ♀.)

Flavius lineaticornis ♂, Stål, Stett. ent. Zeit. xxiii. p. 275. 121[1]; En. Hem. i. p. 125. 1[3].
Flavius pinguis ♀, Stål, Stett. ent. Zeit. xxiii. p. 275. 122[3]; En. Hem. i. p. 125. 2[4].

Hab. Mexico[1 2 3 4] (*coll. Sign.*); Guatemala, Panima, Vera Paz (*Champion*).

Stål considered these sexes distinct species, on account of the wider body and tuberculated posterior femora of the female; this sexual difference, however, occurs also in the next species here enumerated (*Hirilcus alternatus*), of which I have examined a very large series. As regards the small yellow fascia on the posterior tibiæ of the female, I detected this also, though more obscurely, in a male specimen contained in the British Museum.

HIRILCUS.

Hirilcus, Stål, Stett. ent. Zeit. xxiii. p. 274 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 536; Hem. Fabr. i. p. 42 (1862).

Allied to the preceding genus; but the head is not tuberculated beneath, nor is the mesosternum prominently elevated, but more or less convex. The posterior tibiæ are moderately dilated.

In addition to the species here included, three others are recorded from Brazil.

1. **Hirilcus alternatus.** (Tab. X. figg. 9 ♂, 10 ♀.)

Meropachus alternatus, Dall. List Hem. ii. p. 420. 3[1].
Meropachys alternatus, Stål, En. Hem. i. p. 125. 3.

Hab. Mexico[1] (*coll. Sign.*); Guatemala, Teleman, Panzos, Purula, La Tinta, and Chacoj (*Champion*).

This is a variable species, in the emarginate or convex apex of the scutellum, in the colour of the apex of the last joint of the antennæ, and in the colour and markings of the connexivum. In some specimens there is a distinct black mark on each side of the scutellum, about the middle, as described by Dallas; in others this is wanting. These differences are not local; for the two specimens (male and female) figured are both from Chacoj, and, together, exhibit the maximum of variation; neither can these colour-differences be considered sexual. The strongly granulated posterior femora in the female, with the shorter and more robust body, is similar to what is observed in the same sex of the last genus.

Walker, Cat. Het. iv. p. 69, has blundered here with almost disastrous consequences. He has added six specimens, *b–g*, of *Flavius lineaticornis* to the one specimen of this species; and as he has placed them first in the collection, they would naturally mislead any one who consulted Dallas's type without also referring to the description. I was thus deceived myself; and this may be taken as an example of the reason why, in consulting and verifying the species *described* by Walker, I have considered it worse than useless in most instances to accept his determination of other authors' species, or accept the habitats of the same.

LYCAMBES.

Lycambes, Stål, Rio Jan. Hem. ii. p. 58 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 537.
Pachymeria, Laporte, Ess. Hém. p. 28 (1832).

Lycambes is readily distinguished from the two preceding genera by the moderate elevation of the mesosternum and metasternum. This raised portion is somewhat triangular, with the basal angles on the metasternum produced into acute lobes. Of four recorded species, one is peculiar to Central America, two to the Antilles, and one to Brazil.

1. **Lycambes varicolor.** (Tab. XI. figg. 1, 2 ♂, 3 ♀.)

Lycambes varicolor, Stål, Stett. ent. Zeit. xxiii. p. 273. 120[1]; En. Hem. i. p. 128. 4.
Archimerus acutiusculus, Walk. Cat. Het. iv. p. 64. 16[2].
Archimerus guttiventris, Walk. Cat. Het. iv. p. 65. 18[3].
Hirilcus collaris, Walk. Cat. Het. iv. p. 73. 6[4].

Hab. Mexico[1], Orizaba[2], Oaxaca[3 4]; British Honduras, Belize (*Blancaneaux*); Guatemala, La Tinta, Panima, Panzos, San Joaquin (*Champion*); Costa Rica (*coll. Dist.*).

This is a protean species in coloration. Stål[1] thus diagnosed the varietal forms he had observed in Mexican specimens, which seem to apply somewhat correctly to all the Central-American forms which we have received :—

Var. *a.*

Testaceo-flavescens, anastomosi venarum corii nigra; femoribus extus infuscatis; serie laterali macularum lævium straminearum in disco ventris.

This variety includes the form described by Walker under the name of *A. acutiusculus* (female, not male, as stated), and also the two male and female Guatemalan specimens figured (Tab. XI. figg. 2 & 3), which have the under surface of the abdomen pale and unicolorous. The posterior tibiæ of the male are more or less fuscous at base. In all the specimens received from Guatemala the colour of the upper surface is pale green, more or less shaded with dull testaceous.

Var. *b.*

Ut var. *a*, sed obscurior, thoracis macula media, scutello maculisque lateralibus pectoris interdum in vittam confluentibus, stramineis.

This variety has also been received from Guatemala, and is the form described by Walker as *H. collaris.*

Var. *c.*

Nigro-fuscus, macula discoidali thoracis maculisque ventris stramineis; hemelytris fusco-lividis.

This is the variety figured (Tab. XI. fig. 1), and is a Mexican specimen in the collection of Dr. Signoret. It is also the form described by Walker under the name of *A. guttiventris,* and is represented by a Costa-Rican specimen in my own collection.

The majority of the specimens I have examined, especially those from Guatemala, appertain to the form var. *a.* This I imagine to be the original or dominant facies of

the species; and the vars. *b* and *c* are melanic forms which have either acquired (as is likely in most cases) that varietal coloration during life or, as may be possible, from much the same process observed in the genus *Edessa*, owe it (though much more unfrequently) to partial discoloration after death.

Walker has not only described the three varietal forms under three specific names, but under two different genera. What seems inexplicable, however, is, in his description of *H. collaris*, he writes "Dorsum of the abdomen black," whilst the specimen described, the only one in the British-Museum collection, has the wings expanded and the upper surface of the abdomen exposed, which is bright red, with the usual luteous markings.

CORYNOCORIS.

Corynocoris, Mayr, Reise 'Novara,' Hem. p. 95 (1866); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 537.

This genus is primarily distinguished from the last by the posterior femora, which are very slender towards the base, and in length pass the apex of the abdomen; and secondarily by the antenniferous tubercles being spined externally.

But two species are recorded, both of which are Nearctic. One of these, however, has been found in Mexico, and is here enumerated.

1. **Corynocoris distinctus.**

Crinocerus acridioides, H.-S. Wanz. Ins. vi. p. 20, fig. 575.

Merocoris distinctus, Dall. List Hem. ii. p. 419. 2[1]; Uhler, Hayden's Surv. Montana, p. 400[2]; Town. Glover, Ill. Ins. Ord. Hem. p. 47, tab. 1. fig. 17.

Corynocoris distinctus, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 295[3]; Stål, En. Hem. i. p. 130. 2; Walker, Cat. Het. iv. p. 120. 2[4].

Hab. North America, Northern New York to Florida[2], St. Louis[1 4], Colorado[2 3].—Mexico, Orizaba[4].

This species is here included on the strength of a Mexican specimen contained in the British Museum. Prof. Uhler remarks:—"Very variable in depth of colour, distinctness of marking, and in the shape and proportions of the head, antennæ, and legs. In Maryland it is often common in corners of fields adjoining woods, where the small weeds and shrubs grow luxuriantly. It may be swept from the plants in such places as late as to the middle of the month of October." Townend Glover's figure is useless for any practical purpose.

Subfam. *MICTINÆ*.

Mictidida, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 535.

This widely-distributed subfamily is well represented in the Nearctic and Neotropical Regions, of which Central America may be said to contain about half the number of genera, and somewhat more than one third of the number of species.

PACHYLIS.

Pachylis, St.-Fargeau et Serville, Enc. Méth. x. p. 62 (1825); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 538.

The third joint of the antennæ is widely dilated—a character which, taken with the non-dilatation of the outer side of the posterior tibiæ, is sufficient to differentiate *Pachylis* from any allied genus here enumerated. This may be considered a truly Neotropical genus.

1. **Pachylis pharaonis,** var. (Tab. X. fig. 11.)

Cimex pharaonis, Herbst, Gem. Naturg. des Thierr. vi. p. 258. 10, t. 39 A. f. 4.
Lygæus pharaonis, Fabr. Syst. Rhynch. p. 208. 20.
Pendulinus bilineatns, Thunb. Ins. Hem. tria Gen. p. 4. 3.
Pachylis pharaonis, Burm. Handb. ii. 1, p. 338. 2; Spin. Ess. Hém. p. 135. 7; Blanch. Hist. des Ins. p. 122. 2, Hém. t. 3. f. 8, et larva, t. 4. f. 1[1]; Hope, Cat. Hem. ii. p. 13; A. & S. Hist. des Hém. p. 194. 1[2]; Dall. List Hem. ii. p. 383. 1[3]; H.-S. Wanz. Ins. ix. p. 259, f. 987; Stål, Stett. ent. Zeit. xxiii. p. 276, nota[4]; Hem. Fabr. i. p. 46. 2; En. Hem. i. p. 131. 1[5].
Pachylis fallax, Stål, Stett. ent. Zeit. xxiii. p. 276, nota.
Stoll, Pun. f. 20.
Merian, Surin. tab. xli.[6]

Hab. PANAMA (*coll. Dist.*).—GUIANA[1], Surinam[6], Cayenne[2]; BRAZIL[1 5], Para[3], Amazons[5], Minas Geraës[4 5].

A very pale and somewhat small variety, with a central pronotal fascia, is figured, which was received from Panama.

2. **Pachylis laticornis.**

Lygæus laticornis, Fabr. Ent. Syst. Suppl. p. 538. 14, 15; Syst. Rhynch. p. 208. 21.
Pendulinus bidentatus, Thunb. Ins. Hem. tria Gen. p. 6. 9.
Pendulinus gigas, Thunb. Ins. Hem. tria Gen. p. 7. 10.
Pendulinus grossus, Thunb. Ins. Hem. tria Gen. p. 7. 11.
Pachylis laticornis, H.-S. Wanz. Ins. iii. p. 63, ff. 276, 277; Spin. Ess. Hém. p. 135. 2; Blanch. Hist. des Ins. p. 122. 3[1]; Dall. List Hem. ii. p. 384. 4[2]; Stål, Hem. Fabr. i. p. 46. 1; En. Hem. i. p. 131. 2[3]; Uhler, Proc. Bost. Soc. Nat. Hist. xii. p. 323[4]; Berg, Hem. Argent. p. 64. 79[5].
Pachylis rufitarsis, Spin. Ess. Hém. p. 136. 4[6].
Stoll, Pun. ff. 51, 231.

Hab. COSTA RICA, Irazu (*Rogers*).—COLOMBIA[2]; ECUADOR, Napo[4]; BRITISH GUIANA[2]; BRAZIL[1 2 3 6], Rio Janeiro[3]; ARGENTINE REPUBLIC[5].

3. **Pachylis hector.** (Tab. X. figg. 12, 13.)

Pachylis hector, Stål, Stett. ent. Zeit. xxiii. p. 276. 125[1]; En. Hem. i. p. 132. 3[2].

Hab. MEXICO[1 2] (*coll. Sign.*); NICARAGUA, Chontales (*coll. Dist.*); PANAMA (*coll. Dist.*).

Two Nicaraguan specimens are figured, which are slight colour-varieties of this species. Both specimens are males, but show a considerable contrast in the thickness of the posterior femora.

THASUS.

Thasus, Stål, Ann. Soc. Ent. Fr. sér. 4, v. p. 174 (1865); Öfv. Vet.-Ak. Förh. 1867, p. 538.

This genus is closely allied to the last, from which it is separated by the dilatation of the posterior tibiæ on both sides.

Four species are recorded, all of which are Neotropical, one only, according to present knowledge, being also known as a Southern Nearctic form.

1. **Thasus gigas.** (Tab. X. figg. 18 ♂, 19 ♀.)

Pachylis gigas, Burm. Handb. ii. 1, p. 338. 3[1]; Blanch. Hist. des Ins. p. 121. 1[2]; Dall. List Hem. ii. p. 383. 2[3]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 295[4]; Wheeler's Rep. Geog. Explor. v. Zool. p. 831[5]; Town. Glov. Ill. Ins. Ord. Hem. p. 56, t. vii. f. 23 ♂, pupa, t. viii. f. 36[6].

Thasus gigas, Stål, En. Hem. i. p. 132. 1[7].

Pachylis, sp., Dugès, La Nat. iii. p. 52. ff. 1–7[8].

Hab. North America, Arizona[4 5 6], New Mexico[4].—Mexico[1 2 3 4 7].

The males of this species which I have examined vary in size from that of the one figured (Tab. X. fig. 19) to smaller specimens of only 37 millims., which last dimension is also that of the few females which I have seen. The red bands to the posterior femora of the males are also somewhat inconstant, as in one small specimen which I possess they are only faintly indicated. The figure given by Townend Glover (in his somewhat inaccessible publication) is either that of a slight variety, or has not been sufficiently coloured by the artist.

As described by Prof. Uhler, "the nymph, probably in its fourth dress, is almost equally showy, but is differently painted. Its ground-colour is dark steel-blue, velvety; the scutellum cadmium-orange; the venter with large broad bands along the middle; the tergum with transverse white streaks, and a row of short white lines on the middle, with a series of carmine spots each side of the middle line, and with the femora and tibiæ banded with cadmium, but with entirely blue-black antennæ." Dr. Dugès[8] states that this species is found on *Acacia albicans*, and emits a red fluid by means of organs which he describes and figures.

2. **Thasus acutangulus.** (Tab. X. figg. 16 ♂ & 17 ♀.)

Pachylis acutangula, Stål, Öfv. Vet.-Ak. Förh. 1858, p. 439[1].

Pachylis acutangulus, Stål, Stett. ent. Zeit. xxiii. p. 275. 124[2].

Thasus acutangulus, Stål, En. Hem. i. p. 132. 2[3].

Hab. Mexico[1 2 3]; British Honduras, river Sarstoon (*Blancaneaux*); Guatemala, Senahu, Cerro Zunil (*Champion*).

MELUCHA.

Melucha, Amyot & Serville, Hist. des Hém. p. 195 (1843); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 538; En. Hem. i. p. 133 (1870).
Physomerus, Spin. Ess. Hém. p. 139 (1837).
Stenophyllopus, Costa, Rend. Accad. Napol. ii. p. 256 (1863).

Melucha is separated from the preceding genus *Thasus* by the third joint of the antennæ being simple, and the posterior legs placed much closer together.

The genus is a truly Neotropical one; about five species are known, one only of which has at present been received from Central America:—

1. **Melucha phyllocnemis.**

Cerbus phyllocnemis, Burm. Handb. ii. 1, p. 340. 3[1]; H.-S. Wanz. Ins. vi. p. 55, ff. 615, 616[2].
Physomerus lineatocollis, Spin. Ess. Hém. p. 141[3].
Melucha lineicollis, A. & S. Hist. des Hém. p. 196. 1[4].
Melucha phyllocnemis, Dall. List Hem. ii. p. 385. 1[5]; Stål, En. Hem. i. p. 133. 1[6].
Melucha quadrivittis, Stål, Stett. ent. Zeit. xxiii. p. 276. 126[7].

Hab. Mexico[6 7] (*coll. Sign.*); Colombia[5 6]; Brazil[1 2 3 4 5 6]; Paraguay[6].

MOZENA.

Mozena, Amyot et Serville, Hist. des Hém. p. 192 (1843); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 538; En. Hem. i. p. 134 (1870).
Discogaster, Amyot & Serville, Hist. des Hém. p. 191 (1843), excl. syn.
Rhombogaster, Dall. List Hem. ii. p. 379 (1852).
Archimerus, Stål, Stett. ent. Zeit. xxiii. p. 277 (1862).

The principal and a very distinctive character of this genus is the mesosternal longitudinal sulcation near the anterior coxæ. It is also separable from *Melucha* by the posterior tibiæ not being outwardly dilated. Central America appears to be the home of *Mozena*, as, of eleven recorded species, nine have been received from this subregion. The remaining two belong respectively to Colombia and Cuba.

1. **Mozena brunnicornis.**

Archimerus brunnicornis, H.-S. Wanz. Ins. vi. p. 26, ff. 582, 583[1].
Mozena spinicrus, A. & S. Hist. des Hém. p. 192. 1[2]; Stål, Ann. Soc. Ent. de Fr. sér. 4, v. p. 175. 1.
Mozena brunnicornis, Stål, En. Hem. ii. p. 134. 1.

Hab. Mexico[1 2], Yucatan, Valladolid (*Gaumer*).

Two specimens which I have examined from Yucatan have the apical joint of the antennæ fuscous. This does not appear to be a specific distinction, as Prof. Uhler (Bull.

U.S. Geol. & Geog. Surv. ii. p. 296), writing of *Mozena lineolata*, describes the dark apical joint of the antennæ of that species as being wanting in some of the less mature specimens.

2. **Mozena nestor.** (Tab. XI. fig. 5.)

Archimerus nestor, Stål, Stett. ent. Zeit. xxiii. p. 278. 128[1].
Mozena nestor, Stål, En. Hem. i. p. 134. 2[2].

Hab. Mexico [1 2].

The typical specimen figured is in the collection of Dr. Signoret.

3. **Mozena scrupulosa.** (Tab. XI. fig. 4.)

Archimerus scrupulosus, Stål, Stett. ent. Zeit. xxiii. p. 279. 129[1].
Mozena scrupulosa, Stål, En. Hem. i. p. 134. 3.

Hab. Mexico [1].

The type is figured, which is contained in the collection of Dr. Signoret.

4. **Mozena lineolata.**

Archimerus lineolatus, H.-S. Wanz. Ins. vi. p. 25, f. 581[1]; Dall. List Hem. ii. p. 418. 8[2].
Mozena lineolata, Stål, En. Hem. i. p. 134. 4; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 296[3]; Town. Glover, Ill. Ins. Ord. Hem. p. 50, t. viii. f. 27.

Hab. North America, Arizona [3], California [3].—Mexico [1 2 3]; Guatemala, San Gerónimo, Chiacam (*Champion*); Costa Rica (*Van Patten*).

The variation in the colour of the apical joints of the antennæ, which was noticed also in *M. brunnicornis*, and which, as mentioned before, Prof. Uhler regards as belonging to more or less mature specimens, is well observed in those received from Guatemala. Prof. Uhler further remarks that sometimes "the connexivum lacks the blackish spots."

5. **Mozena lunata.**

Archimerus lunatus, Burm. Handb. ii. 1, p. 322. 2[1]; H.-S. Wanz. Ins. vi. p. 24. f. 580, A[2]; Dall. List Hem. ii. p. 416. 4[3]; Stål, Stett. ent. Zeit. xxiii. p. 279. 130[4].
Mozena lunatas, Stål, En. Hem. i. p. 134. 5[5]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 295. 1[6].

Hab. North America, Texas [6], New Mexico [6].—Mexico [1 2 3 4 5] (*coll. Sallé*), Oaxaca (*coll. Dist.*); Guatemala, San Gerónimo (*Champion*).

6. **Mozena affinis.** (Tab. XII. fig. 2.)

Archimerus affinis, Dall. List Hem. ii. p. 417. 6[1].
Mozena affinis, Stål, En. Hem. i. p. 135. 9.

Hab. Mexico [1].

The figure is taken from the type in the collection of the British Museum.

7. **Mozena lurida.** (Tab. XII. fig. 1.)

Archimerus luridus, Dall. List Hem. ii. p. 417. 7 [1]; Stål, Stett. ent. Zeit. xxiii. p. 279. 131 [2].
Mozena lurida, Stål, En. Hem. i. p. 135. 10.

Hab. Mexico [2]; British Honduras [1].

The typical specimen contained in the British Museum is here figured.

8. **Mozena ventralis.**

Capaneus ventralis, Mayr, Verh. zool.-bot. Ges. Wien, xv. p. 432 [1].
Mozena ventralis, Stål, En. Hem. i. p. 135. 11.

Hab. Mexico [1].

I have had no opportunity as yet of seeing a specimen of this species, which, however, from the description, appears to have a distinct character.

9. **Mozena lutea.**

Archimerus luteus, H.-S. Wanz. Ins. vi. p. 26. f. 584.
Discogaster rhomboideus, A. & S. Hist. des Hém. p. 192. 1, t. 4. f. 6 (excl. syn. Burm. et Blanch.).
Rhombogaster luteus, Dall. List Hem. ii. p. 415. 1 [1].
Mozena lutea, Stål, En. Hem. i. p. 135. 6 [2].

Hab. Mexico, Vera Cruz [2]; British Honduras [1], Belize (*Blancaneaux*).

Amyot and Serville give "Rio Janeiro; Mexique?" as habitats of this species, of which the first is most probably incorrect.

CAPANEUS.

Capaneus, Stål, Stett. ent. Zeit. xxiii. p. 277 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 538.

Capaneus differs from the preceding genus in the absence of the mesosternal sulcation. The posterior margins of the pronotum are rounded, but truncated at the base. This basal truncated portion is not wider than the base of the scutellum.

Stål (En. Hem. i. pp. 135 to 137) has divided *Capaneus* into five subgenera, an arrangement I have not followed here. The genus as at present recorded contains eight species, all of which are found in Central America.

1. **Capaneus multispinus.** (Tab. XI. fig. 6.)

Capaneus multispinus, Stål, Stett. ent. Zeit. xxiii. p. 280. 132 [1].
Capaneus (*Acanthobolus*) *multispinus,* Stål, En. Hem. i. p. 136. 1 [2].

Hab. Mexico [1 2].

The specimen figured is a typical one, in the collection of Dr. Signoret.

2. **Capaneus achilles.** (Tab. XI. fig. 7.)

Capaneus achilles, Stål, Stett. ent. Zeit. xxiii. p. 280. 133[1].
Capaneus (*Acidomus*) *achilles*, Stål, En. Hem. i. p. 136. 2[2].

Hab. Mexico [1 2].

A female typical specimen is figured, from the collection of Dr. Signoret.

3. **Capaneus auriculatus.** (Tab. XI. fig. 8.)

Capaneus auriculatus, Stål, Stett. ent. Zeit. xxiii. p. 290. 134[1].
Capaneus (*Xuthus*) *auriculatus*, Stål, En. Hem. i. p. 136. 3[2].
Xuthus auriculatus, Uhler, Bull. U.S. Geol. & Geogr. Surv. ii. p. 296[3].

Hab. North America, Texas [3], New Mexico [3].—Mexico [1 2] (*coll. Sallé*); Guatemala, Sinanja, Chacoj, Panima, Teleman, Cubilguitz (*Champion*).

A male specimen from Guatemala is figured. From the specimens I have examined it appears that those from Guatemala are somewhat darker in hue than the ordinary Mexican forms.

4. **Capaneus rubronotatus.** (Tab. XI. fig. 9.)

Capaneus rubro-notatus, Stål, Stett. ent. Zeit. xxiii. p. 290. 135[1]; En. Hem. i. p. 137. 4[2].

Hab. Mexico [1 2]; Guatemala, Teleman, Cerro Zunil (*Champion*).

The figure is taken from a female specimen received from Guatemala.

5. **Capaneus vates.** (Tab. XII. fig. 12).

Capaneus vates, Stål, Stett. ent. Zeit. xxiii. p. 290. 136[1]; En. Hem. i. p. 137. 5[2].

Hab. Mexico [1 2] (*Sichel, mus. Vind. Cæs.*).

The specimen figured is a typical Mexican one in the Stockholm Museum.

6. **Capaneus tetricus.** (Tab. XII. fig. 6.)

Capaneus tetricus, Stål, Stett. ent. Zeit. xxiii. p. 291. 137[1]; En. Hem. i. p. 137. 6[2].
Archimerus muticus, var. ?, Walk. Cat. Het. iv. p. 63[3].

Hab. Mexico [1 2 3], Oaxaca [3]; Guatemala, San Gerónimo (*Champion*).

Var. *a*.

Abdomen above black.

Var. *b*.

Abdomen above red, with the apex black.

Both these varieties are common to Mexico and Guatemala. The figure is the form

described by Walker as *Archimerus muticus*, var. ?, and represents the typical specimen contained in the British Museum, which is a somewhat pale variety, in which the yellow spot on the scutellum is larger than in ordinary forms of the species, of which Dr. Signoret has afforded me an opportunity of examining a type.

7. **Capaneus odiosus.** (Tab. XI. figg. 11 ♂, 12 ♀.)

Capaneus odiosus, Stål, Stett. ent. Zeit. xxiii. p. 291. 138[1]; En. Hem. ii. p. 137. 7[2].
Archimerus dolosus, Walker, Cat. Het. iv. p. 66. 20[3].

Hab. Mexico[1 2] (*coll. Sign.*), Oaxaca[3]; British Honduras, river Sarstoon (*Blancaneaux*); Guatemala, Teleman, San Gerónimo, Purula (*Champion*); Nicaragua, Chontales (*coll. Dist.*); Panama (*coll. Dist.*).

This species not only varies in the colour of the abdomen above, as pointed out by Stål, and as also occurs in the previous species here enumerated, but also in size, some specimens from Guatemala being 24 millims. in length.

The specimens figured are a male from Honduras and a female from Guatemala.

8. **Capaneus spurcus.** (Tab. XII. fig. 3.)

Capaneus spurcus, Stål, Stett. ent. Zeit. xxiii. p. 291. 139[1].
Capaneus (*Rhyparopharus*) *spurcus*, Stål, En. Hem. i. p. 137. 8[2].

Hab. Mexico[1 2], Yucatan, Valladolid (*Gaumer*); Guatemala, Purula (*Champion*).

A Guatemalan specimen is figured.

ARCHIMERUS.

Archimerus, Burm. Handb. ii. 1, p. 321 (1835); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 538.
Piezogaster, Amyot & Serville, Hist. des Hém. p. 197 (1843); Stål, Stett. ent. Zeit. xxiii. p. 277 (1862).

Archimerus is at once distinguished from *Capaneus* by the basal truncated portion of the pronotum being wider than the base of the scutellum; and the posterior angles of the pronotum are distinct.

Six species of this genus are at present known: four are here enumerated from Central America; one is a Nearctic form; and the other was described from Venezuela.

1. **Archimerus squalus.**

Archimerus squalus, Herrich-Schäffer, Wanz. Ins. vi. p. 24. f. 579[1]; Stål, En. Hem. i. p. 138. 2[2].

Hab. Mexico[1 2].

2. **Archimerus scutellaris.** (Tab. XI. figg. 13 ♂, 14 ♀.)

Piezogaster scutellaris, Stål, Stett. ent. Zeit. xxiii. p. 292. 141[1].
Archimerus scutellaris, Stål, En. Hem. i. p. 138. 4[2].
Archimerus maculifer, Walk. Cat. Het. iv. p. 65. 19[3].

Hab. Mexico [1 2], Orizaba [3], Yucatan, Valladolid (*Gaumer*); Guatemala, Panima, Tamahu (*Champion*); Costa Rica, Cache, Irazu (*Rogers*).

Two Yucatan specimens are figured.

Var.

Head, first and second joints of antennæ, pronotum, scutellum, underside of body and legs pitchy. Abdomen above pitchy, with three transverse discal luteous fasciæ, the first of which is indistinct.

Hab. Mexico (*Mus. Holm.*).

3. **Archimerus indecorus.** (Tab. XII. figg. 4 ♂, 5 ♀.)

Archimerus indecorus, Walker, Cat. Het. iv. p. 64. 17 [1].

Hab. Mexico [1] (*coll. Sign.*, *Mus. Holm.*), Oaxaca [1], Tejuca [1]; Guatemala, Calderas, Dueñas (*Champion*).

A Mexican male and a Guatemalan female specimen are figured. The colour of the abdomen above is generally red, but sometimes pitchy. The general hue also varies towards melanism, as occurs in some species of most of the allied genera.

4. **Archimerus thoracicus,** n. sp. (Tab. XII. figg. 7 ♂, 8 ♀.)

Fuscous, sparingly pilose, with a dull ochraceous subapical patch to corium. Antennæ with the first joint a little longer than the second, third shortest, fourth incrassated, longer than third, but shorter than second. Pronotum with the lateral angles strongly produced, sinuated, and terminating subacutely at apex; lateral margins finely denticulated, anterior third pilose and levigate; disk strongly but sparingly granulose. Scutellum transversely and somewhat irregularly striate. Corium somewhat densely punctate, with the nervures prominent; membrane cupreous. Underside of body and legs concolorous; anterior and intermediate tibiæ and tarsi somewhat paler.

♂. Posterior femora strongly incrassated, outwardly armed with five strong spines, two of which are usually the longest and strongest, inwardly margined by less-developed spines, and provided with two or three obtuse tubercles above. Posterior tibiæ curved, slightly dilated, and armed inwardly with a spine about one third from apex.

♀. Abdomen broader and more dilated than in ♂. Posterior femora much less incrassated, and armed internally with an apical row of spines. Posterior tibiæ straight and simple.

Long. 20–22 millim., lat. pronot. ang. 9–10 millim.

Hab. Guatemala, Purula, Sinanja valley (*Champion*).

In the female specimens now before me all the tibiæ are paler in hue; and in both sexes the bases of the femora and third joints of the antennæ are sometimes castaneous. The amount of incrassation of the posterior femora in the males is also a variable character. The dilated pronotal angles will alone sufficiently separate this very distinct species.

MAMURIUS.

Mamurius, Stål, Stett. ent. Zeit. xxiii. p. 278 (1862).

This genus principally differs from *Archimerus* by the produced median lobe of the head. Only one species is known, and that at present from Mexico alone:—

1. **Mamurius mopsus.** (Tab. XII. fig. 15.)

Mamurius mopsus, Stål, Stett. ent. Zeit. xxiii. p. 293. 142[1]; En. Hem. i. p. 138. 1[2].

Hab. Mexico [1 2].

A typical specimen in the collection of Dr. Signoret is here figured.

NEMATOPUS.

Nematopus, Latreille, Règne An. v. p. 197 not. (1829); Laporte, Ess. Hém. p. 30 (1832); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 539.

Merardus, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 450; Hem. Fabr. p. 48, note (1868).

The posterior coxæ are placed much closer together than in the preceding genus, equalling in this respect the position of the intermediate coxæ. The head above is obtusely tuberculated near the inner margin of the eyes.

This is a well-represented Neotropical genus; but only two species have as yet been received from Central America:—

1. **Nematopus lepidus.** (Tab. XI. fig. 10, ♀.)

Nematopus lepidus, Stål, Stett. ent. Zeit. xxiii. p. 293. 143[1]; En. Hem. i. p. 141. 3[2].

Hab. Mexico [1 2]; Guatemala, Senahu, Panima (*Champion*).

A female specimen from Guatemala is here figured.

2. **Nematopus nigro-annulatus.** (Tab XII. fig. 14.)

Nematopus nigro-annulatus, Stål, En. Hem. i. p. 141. 4[1].

Hab. Mexico [1]; Guatemala, Cahabon (*Champion*).

A Guatemalan specimen is here figured.

SAGOTYLUS.

Sagotylus, Mayr, Verh. zool.-bot. Ges. Wien, xv. p. 431 (1865); Reise d. Nov., Hem. p. 88 (1866) Stål, Öfv. Vet.-Ak. Förh. 1867, p. 539.

Mictoides, Walk. (part.) Cat. Het. iv. p. 38 (1871).

Sagotylus is at once separated from *Nematopus* by the head, which is strongly

emarginate between the antenniferous tubercles. The genus at present contains but the following species:—

1. Sagotylus confluentus.

Coreus confluentus, Say, Heterop. New Harm. ii. n. 1; Compl. Writ. i. p. 325. 1[1].
Crinocerus triguttatus, H.-S. Wanz. Ins. vi. p. 86, fig. 656[2].
Mictis? triguttata, Dall. List Hem. ii. p. 402. 45[3].
Sagotylus triguttatus, Stål, En. Hem. i. p. 143. 1[4].
Mictoides triguttata, Walk. Cat. Het. iv. p. 38. 2[5].
Sagotylus confluentus, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 297[6].

Hab. North America[1], Arizona[6], California[6].—Mexico[1 2 3 4 6], Orizaba[5]; British Honduras, Rio Hondo (*Blancaneaux*); Guatemala, Capetillo, San Gerónimo, Guatemala city, Chacoj (*Champion*), Escuintla (*Mus. Vind. Cæs.*).

I have followed Prof. Uhler in considering Say's name as the earliest for this species. Stål (En. Hem. i. p. 174) placed it as a synonym of *Spartocera fusca*, Thunb.

S. confluentus varies much in the amount of its black markings. The two large subbasal spots to the pronotum, as shown in Herrich-Schäffer's figure, diminish in size in different specimens, until in some they are totally obliterated. The quantity of black coloration on the underside of the body is also inconstant. Say's type appears to be one of the protean forms of the species in which the scutellum is not wholly black.

ACANTHOCERUS.

Acanthocerus, Palisot de Beauvois, Ins. p. 204 (1805); Stål, En. Hem. i. p. 144 (1870).
Acanthocerus, subj. *Hymeniphera*, Lap. Ess. Hém. p. 43 (1832).
Hymenophora, Amyot & Serville, Hist. des. Hém. p. 212 (1843); Mayr, Reise d. Nov., Hem. p. 88 (1866); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 539.
Camptischium, Amyot & Serville, Hist. des Hém. p. 213 (1843); Mayr, Reise d. Nov., Hem. p. 89; Stål, Öfv. Vet.-Ak. Förh. 1867, p. 539.
Euthochtha, Mayr, Verh. zool.-bot. Ges. Wien, xv. p. 431 (1865); Reise d. Nov., Hem. p. 88 (1866); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 539.

In this genus the antenniferous tubercles are externally spinous, the lateral pronotal angles spinous and acutely produced, the lateral pronotal margins are distinctly denticulated, and the metasternum at the outer margins of the posterior coxæ is produced into a tooth-like lobe. Five species are enumerated by Stål, all of which are Neotropical: three appear to be peculiar to the Antilles; and only one has been received from Central America:—

1. Acanthocerus clavipes.

Coreus clavipes, Fabr. Syst. Rhynch. p. 196. 20.
Crinocerus fulvicornis, H.-S. Wanz. Ins. vi. p. 87, f. 657[1]; Dall. List Hem. ii. p. 408. 5[2].
Camptischium spinosum, A. & S. Hist. des Hém. p. 213. 1, t. 4. f. 5[3].

Camptischium clavipes, Stål, Hem. Fabr. i. p. 49. 1.
Stoll, Pun. figs. 98, 287.
Acanthocerus (*Camptischium*) *clavipes*, Stål, En. Hem. i. p. 145. 4[4]; Berg, Hem. Argent. p. 68. 82[5].

Hab. PANAMA (*coll. Dist.*).—COLOMBIA [4]; GUIANA [2 4], Demerara [1], Cayenne [3]; BRAZIL [4], Madeira, river Amazons (*coll. Dist.*); ARGENTINE REPUBLIC [5].

MACHTIMA.

Machtima, Amyot & Serville, Hist. des Hém. p. 215 (1843); Stål, Öfv. Vet-Ak. Förh. 1867, p. 540.

The lateral margins of the pronotum are entire, not denticulated, and the apical joint of the antennæ longer than the penultimate.

Of this Neotropical genus, one Mexican and two other species, received from Brazil and Colombia, are all that are at present known.

1. **Machtima mexicana.** (Tab. XI. fig. 15.)

Machtima mexicana, Stål, En. Hem. i. p. 147. 2[1].
Machtima crucigera (*h*), Walker, Cat. Het. iv. p. 120. 1[2].

Hab. MEXICO [1] (*coll. Dist.*).—HONDURAS [2].

This species is very closely allied to *M. crucigera*, Fabr. The differences appear to be mostly of colour alone; and it is questionable whether it is not a local race of the Fabrician species.

Subfam. *ACANTHOCEPHALINÆ.*

Placoscelidida, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 535.
Acanthocephalina, Stål, En. Hem. i. p. 149 (1870).

This subfamily comprises a group of Neotropical insects which only just, and to a small extent, enter the Nearctic Region. Of the nine recorded genera two are found in Central America.

ACANTHOCEPHALA.

Acanthocephala, Laporte, Ess. Hém. p. 29 (1832).
Diactor, p., Burm. Handb. ii. 1, p. 333 (1835).
Metapodius, Hope, Cat. ii. p. 4 (1842); Dall. List Hem. ii. p. 378 (1852); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 541.
Metopodus, Amyot & Serville, Hist. des Hém. p. 192 (1843).

The largely dilated posterior tibiæ, and the posterior femora armed above with small tubercles and inwardly spined, are salient characters of this genus. Stål thus further particularizes it—"Articulis duobus apicalibus rostri ad unum articulo secundo longioribus." The species which form this genus are of an extremely variable character; and many which have been described are doubtless of synonymic value only. However,

none of Hope's species is at all identical with any here referred to, as drawings of the same have been forwarded to Oxford, and, by the kind assistance of Mr. F. E. Robinson and Prof. Westwood, have been carefully compared with the types in the Hopeian collection. I have myself done the same with those described by Dallas and Walker.

This is a Neotropical genus, which comprises a few Nearctic species.

1. **Acanthocephala latipes.**

Cimex latipes, Drury, Ins. iii. p. 63, t. 45. f. 3 [1]; Herbst, Gem. Naturg. vi. p. 257. 9, t. 39 A. f. 3.
Lygæus compressipes, Fabr. Syst. Rhynch. p. 209. 24.
Diactor compressipes, Burm. Handb. ii. 1, p. 334. 1; H.-S. Wanz. Ins. iii. p. 93, f. 317 [2].
Anisoscelis compressipes, Blanch. Hist. des Ins. p. 122, 1.
Metopodus latipes, A. & S. Hist. des Hém. p. 193. 1 [3].
Metapodius latipes, Dall. List Hem. ii. p. 427. 1 [4]; Stål, Hem. Fabr. i. p. 50. 1.
Metapodius albicollis, Dall. List Hem. ii. p. 427. 2.
Stoll, Pun. f. 14.
Acanthocephala latipes, Stål, En. Hem. i. p. 149. 1 [5]; Berg, Hem. Argent. p. 70. 85 [6].

Hab. PANAMA (*coll. Dist.*).—JAMAICA [1]; COLOMBIA [5]; GUIANA, Surinam [5]; BRAZIL [2 3 4 5], Para [5], Pebas (*coll. Dist.*), Rio Janeiro [5]; ARGENTINE REPUBLIC [6].

The Panama specimen here referred to is the form *M. albicollis*, Dall.

2. **Acanthocephala declivis.** (Tab. XI. figg. 19 & 24 ♂, 21 ♀.)

Rhinuchus declivis, Say, New Harm. Ind. Jan. 1832, p. 10; Compl. Writ. i. p. 305. 2.
Diactor alatus, Burm. Handb. ii. 1, p. 334. 3 [1].
Anisoscelis declivis, Say, Compl. Writ. i. p. 327. 4.
Metapodius thoracicus, Dall. List Hem. ii. p. 428. 3 [2].
Acanthocephala declivis, Stål, En. Hem. i. p. 150. 2 [3]; Uhler, Bull. U.S. Geol. & Geogr. Surv. ii. p. 297 [4]; Town. Glov. Ill. Ins. Ord. Hem. p. 20, t. 7. fig. 24.
Acanthocephala alata, Stål, En. Hem. i. p. 150. 3 [5].

Hab. NORTH AMERICA, Texas [3 4], Arizona [4], Florida [4], California [4], New Mexico [4].—MEXICO [4 5] (*coll. Sallé*), Vera Cruz [5], Oaxaca [1], Yucatan, Valladolid (*Gaumer*); CENTRAL AMERICA [4]; HONDURAS [2], river Sarstoon (*Blancaneaux*).

Prof. Uhler remarks:—"This species varies greatly in size, in the shape and acuteness of the pronotal wings, in the number of spines of the femora, in the width and shape of the expansions of the tibiæ, and in the colour of the antennæ. Colossal specimens from South Carolina and Florida measure as much as 34 millims. in length. In the less mature state the antennæ are entirely reddish cinnamomeous. Old specimens are dark fuscous, powdered beneath with whitish." These remarks cover almost all the peculiarities of the specimens now before me, and seem to explain away the only points raised by Stål to separate *A. alata* from *A. declivis*, Say—"maxime affinis

et simillima, tibiis posticis superne distincte spinosis, articuloque quarto antennarum fulvescente differt." The specimens figured are from Yucatan; and fig. 24 represents the male form described by Dallas as *M. thoracicus*. It will be noticed that in the specimen represented by fig. 19 the posterior angles of the pronotum are strongly angulated. This, however, exists in all the forms of the species, but is best seen in those specimens in which the pronotal surface has become somewhat raised, and is a character which, though faithfully portrayed by the artist, for these reasons possesses no distinctive value.

Var. **guatemalena.** (*Acanthocephala alata*, Tab. X. figg. 14 & 15.)

♀. Closely allied to *A. declivis*, but differs principally by the greater dilatation of the posterior tibiæ, which are rounded and not acutely truncated at apex.

Long. 25–35 millim.

Hab. GUATEMALA, Teleman, La Tinta, Cerro Zunil, San Isidro, Las Mercedes (*Champion*).

The varietal character only of this form is well shown by fig. 14, which represents a specimen in which the outer dilatation of the right and left posterior tibiæ is seen to be asymmetrical; the apex of the left tibia is also acutely truncated, whilst that of the right is rounded, a character otherwise constant in three specimens before me. The male resembles in all respects the same sex in *A. declivis*.

Var. **panamensis.** (Tab. XI. figg. 22 ♂ & 23 ♀.)

Allied to *A. declivis*, Say, but differs by the much greater dilatation of the posterior tibiæ in both sexes, which in the female is greater than in typical forms of *A. declivis* and less than in var. *guatemalena*.

Long. 32 millim.

Hab. PANAMA (*Boucard*).

It is possible that these two supposed varieties may prove to be local races; but at the present time I have neither seen a sufficient number of specimens, nor sufficient constancy in characters to warrant my forming that conclusion. Certainly the typical forms of the species do not seem to extend further south than Mexico; but, on the other hand, the increasing dilatation of the posterior tibiæ does not correlate with decreasing latitude in habitat, as the Panama variety is intermediate in that respect between the variety from Guatemala and the Mexican typical form.

3. **Acanthocephala subalata,** n. sp. (Tab. XI. fig. 20.)

♂. Fuscous, faintly and obscurely clothed with ochraceous pubescence. Antennæ with the first and second joints subequal, third shorter, remainder mutilated. Pronotum with the anterior third densely pubescent, lateral margins denticulated, lateral angles produced, with their apices subacute and their margins denticulated; posterior angles moderately produced on each side of base of scutellum. Apex of scutellum pale greenish. Membrane dark shining cupreous, of which the basal third is somewhat paler. Body beneath concolorous, excepting fore and intermediate trochanters, bases of femora, tibiæ, all the tarsi, and a large spot at odoriferous apertures, which are more or less dull ochraceous.

Fore and intermediate femora with a row of small spines beneath; posterior femora much thickened, with a

double row of tubercles on outer surface, a row of smaller and more obscure tubercles on upper and lower surface, and a row of spines on inner margin, of which three situated on apical half are longest. Posterior tibiæ very faintly dilated inwardly, but finely denticulated; strongly dilated outwardly, gradually widening from base to near the middle, where they are strongly sinuated and narrowed to the apex; apices concavely truncated.

Long. 28 millim.

Hab. GUATEMALA, Balheu (*Champion*).

Allied to *A. declivis*, but differs at once from all the forms of that species by the much less produced lateral angles of the pronotum.

4. **Acanthocephala granulosa.** (Tab. XI. fig. 18 ♀; Tab. XII. fig. 9 ♂.)

Metapodius granulosus, Dall. List Hem. ii. p. 430. 7[1]; Uhler, Bull. U.S. Geol. & Geogr. Surv. ii. p. 298[2]; id. Wheeler's Rep. Geog. Expl. v. Zool. p. 831[3].

Diactor alatus, H.-S. Wanz. Ins. vi. p. 53, f. 613 (excl. syn.)[4].

Acanthocephala (*Metapodius*) *granulosa*, Stål, En. Hem. i. p. 151. 6[5].

Metapodius thomasii, Uhler, Hayden's Surv. Montana, p. 399. 1 (1872)[6].

Acanthocephala thomasii, Town. Glov. Ill. Ins. Ord. Hem. p. 20, t. iv. f. xi., and t. vii. f. 22.

Hab. NORTH AMERICA, Arizona[2 6], California[2 3], Colorado[3], Texas[2].—MEXICO[2 4 5], Yucatan, Valladolid (*Gaumer*); HONDURAS[1], Belize, Rio Hondo (*Blancaneaux*); GUATEMALA, Capetillo, Chiacam, San Gerónimo, San Juan (*Champion*); NICARAGUA, Chontales (*coll. Dist.*); COSTA RICA (*Van Patten*).

This species varies in the more or less sinuated and angulated posterior tibiæ in both sexes. Of the two specimens figured, the male represents the type contained in the British Museum, and the female is that of a specimen received from Yucatan, which is also strictly typical.

M. thomasii, Uhler, agrees with the specimen figured by Herrich-Schäffer under the name of *D. alatus* in having the posterior tibiæ of the male much less angulated and sinuated. Uhler states that after a close examination of other and darker specimens he considers his *M. thomasii* to be a pale variety of *M. granulosus*; and a large series of specimens which have passed through my hands confirms this view.

5. **Acanthocephala luctuosa.** (Tab. XII. fig. 10.)

Metapodius luctuosus, Stål, Öfv. Vet.-Ak. Förh. 1855, p. 184. 1[1].

Acanthocephala (*Metapodius*) *luctuosa*, Stål, En. Hem. i. p. 151. 7[2].

Hab. MEXICO[1 2].

The figure is that of a typical specimen in the Stockholm Museum.

6. **Acanthocephala bicoloripes.** (Tab. XI. figg. 16 ♂, 17 ♀).

Metapodius bicoloripes, Stål, Öfv. Vet.-Ak. Förh. 1855, p. 184. 2[1].

Acanthocephala (*Metapodius*) *bicoloripes*, Stål, En. Hem. i. p. 151. 9[2].

Hab. COSTA RICA (*Van Patten*), Caché (*Rogers*).—COLOMBIA, Antioquia[1 2].

In the Costa-Rican specimens examined the antennæ and fore and intermediate tibiæ are pale ochraceous, not castaneous as in the Colombian forms described by Stål.

I submitted the figures here given to Dr. Aurivillius, who kindly compared them with Stål's type, and reported:—"The typical female of *Metapodius bicoloripes*, Stål, agrees very well; but the male placed under this heading by Stål differs from your figure prothorace carina media destituto et tibiis posticis vix dilatatis, marginibus fere parallelis spinisque femorum post. intus 3–4." As, however, Stål first described a female specimen, with which these Costa-Rican forms agree, the male here figured, received from the same place and at the same time, should be typical, and that afterwards placed by Stål as such in the Stockholm Museum, and referred to by Dr. Aurivillius as above, is probably a varietal form.

STENOSCELIDEA.

Stenoscelidea, Hope, Cat. Hem. ii. p. 17 (1842, partim).
Melynthus, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 457.
Fulicopus, Costa, Rendic. Accad. Napol. ii. p. 259 (1863).

Several intermediate Neotropical genera between *Stenoscelidea* and *Acanthocephala* exist, of which no representatives have as yet been received from Central America. The structural differences are therefore so considerable, especially in the slender posterior femora, that little generic diagnosis need be here given. The posterior tibiæ are dilated and longer than the posterior femora. This genus is also Neotropical; and of four recorded species, only one is at present known from Central America.

1. **Stenoscelidea ænescens.** (Tab. XII. fig. 13.)

Stenoscelidea ænescens, Stål, En. Hem. i. p. 154. 4[1].

Hab. MEXICO, Vera Cruz[1]; GUATEMALA, Capetillo, San Gerónimo, Las Mercedes, San Isidro, El Reposo (*Champion*).

A typical Mexican specimen in the Stockholm Museum is here figured.

Subfam. *COREINÆ.*

Coreida, Stål, Öfv. Vet-Ak. Förh. 1867, p. 535.
Coreina, Stål, En. Hem. i. p. 157 (1870).

Division **ANISOSCELARIA.**

Anisoscelidida, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 543.
Anisoscelidina, Stål, En. Hem. i. p. 157 (1870).
Anisoscelaria, Stål, En. Hem. iii. p. 35 (1873).

This division of the large subfamily Coreinæ, distinguished by "Tibiis posticis plus minus dilatatis," comprises at present about nine Neotropical genera, two of these being represented in the Southern Nearctic Region, of which one is also found

in the Ethiopian, Oriental, and Australian Regions. Four of these genera are here included in the Central-American fauna, and comprise about one third of the whole number of species described as belonging to the Anisoscelaria.

HOLYMENIA.

Copium, Thunb. Hem. Rostr. cap. ii. p. 8 (1822); Ins. Hem. tria Gen. p. 8 (1825); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 544.
Holhymenia, St.-Farg. et Serv. Enc. Méth. x. p. 61 (1825).
Copius, Burm. Handb. ii. 1, p. 329 (1835).
Holymenia, Stål, En. Hem. i. p. 157 (1870).

The dilatation of the second and third joints of the antennæ and the length of the posterior femora (which extend beyond the apex of the abdomen) sufficiently characterize this genus. Five species are now known, all Neotropical, of which one from Panama is included here:—

1. **Holymenia histrio.**

Alydus histrio, Fabr. Syst. Rhynch. p. 248. 2.
Copius histrio, Burm. Handb. ii. 1, p. 330. 1[1]; Dall. List Hem. ii. p. 467. 3[2].
Copius scurra, Burm. Handb. ii. 1, p. 330. 3[3].
Copium histrio, Stål, Hem. Fabr. i. p. 50. 1.
Holymenia histrio, Stål, En. Hem. i. p. 157. 4[4].
Stoll, Pun. fig. 294.

Hab. PANAMA (*coll. Dist.*).—COLOMBIA[2]; GUIANA[2], Demerara (*coll. Dist.*), Surinam[3]; BRAZIL[2 4], Para[1], Bahia[1].

ANISOSCELIS.

Anisoscelis, Latreille, Règn. An. Ins. p. 197 (1829); Laporte, Ess. Hém. p. 31 (1832); Stål, Stett. ent. Zeit. xxiii. p. 294 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 544.

Anisoscelis differs at first sight from the preceding genus by its simple antennæ; the posterior tibiæ are also dilated and foliaceous. This is another Neotropical genus (one species has been described by Stål with doubt as from Tahiti), and is largely represented in Central America.

1. **Anisoscelis gradadia,** n. sp. (Tab. XIII. figg. 1 ♂, 2 ♀.)

Head ochraceous, base and a lateral streak behind each eye black. Antennæ blackish or very dark olive-green, basal joint inwardly pale green. Pronotum reddish brown, lateral margins narrowly and sub-basal margin more broadly black, the extreme basal margin narrowly pale ochraceous; at anterior margin are two transverse callosities, which in some specimens are concolorous, in others dark fuscous. Scutellum dark brownish, with the lateral margins and a central longitudinal line pale ochraceous. Corium reddish brown, with the nervures, claval, costal, and apical margins pale ochraceous. Membrane fuscous. Abdomen above pale or dark brown, with the incisures and a spot near the lateral margins of each segment pale ochraceous. Body beneath pale ochraceous; legs pale greenish, with black lines; apex of posterior femora yellow; posterior tibiæ much dilated, dilatation narrowing towards apex, but occupying rather more than three fourths of the whole length.

♂. Posterior tibiæ dark fuscous, with the base, a spot on each margin before centre, apex, and tarsi yellow.
♀. Posterior tibiæ more foliaceous than in ♂, reddish, with the base, a waved and somewhat irregular transverse fascia before centre, apex, and tarsi yellow.
Long. ♂ 15 millims., ♀ 17–18 millims.

Hab. GUATEMALA, Panima, Purula, Senahu (*Champion*).

This species is closely allied in colour and markings to *A. alipes*, Guér., but differs in the much more prolonged dilatation of the posterior tibiæ.

Var. *a*.

Darker, with the yellow markings above more obscure. Head reddish, with a central fuscous patch; antennæ paler, inner margin of first and second joints pale green, third and fourth joints dull ochraceous, apex of third joint fuscous. Body beneath, apex of posterior femora, and pale markings to posterior tibiæ reddish.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

2. **Anisoscelis alipes.**

Anisoscelis alipes, Guér. Mag. de Zool. iii. Ins. t. 75 [1]; Stål, En. Hem. i. p. 159. 5.

Hab. MEXICO [1].

3. **Anisoscelis hymeniphera.**

Anisoscelis hymeniphera, Westw. in Duncan's Nat. Libr. Entom. i. p. 275, t. 20. f. 3 [1]; Stål, En. Hem. i. p. 159. 6.

Hab. MEXICO [1].

4. **Anisoscelis affinis.** (Tab. XIII. fig. 3.)

Anisoscelis affinis, Westw. in Duncan's Nat. Libr. Entom. i. p. 275; Stål, En. Hem. i. p. 159. 7 [1].
Diactor rufus, Dall. List Hem. ii. p. 451. 3 [2].

Hab. MEXICO [1]; HONDURAS [2]; GUATEMALA, Chacoj, Panzos, Lanquin (*Champion*).

A Guatemalan specimen is figured.

5. **Anisoscelis flavo-lineata.**

Anisoscelis flavo-lineatus, Blanch. in d'Orbigny, Dict. Univ. d'Hist. Nat. Atlas, Ins. Hém. t. 6. f. 7; Stål, En. Hem. i. p. 159. 8 [1].

Hab. PANAMA (*coll. Dist.*).—COLOMBIA, Bogota [1].

LEPTOGLOSSUS.

Anisoscelis, Spin. Ess. Hém. p. 200 (1837).
Leptoglossus, Guér. Voy. de la Coq., Ins. p. 174 (1838); Stål, En. Hem. i. p. 160 (1870).
Theognis, Stål, Stett. ent. Zeit. xxiii. p. 294 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 544; Mayr, d. Reise Nov. Hem. p. 101 (1866).

From *Anisoscelis Leptoglossus* primarily differs in having the spiracles both at the base and apex of the abdomen about equally remote, and not distinctly separated

furthest at the base. The length of the first joint of the antennæ is about equal to that of the head, which is shorter than the pronotum.

This genus is found in the Neotropical, Nearctic, Ethiopian, Oriental, and Australian Regions. The great majority of the species are Neotropical, about one third of the whole number being found in Central America, to which subregion a few are peculiar.

1. Leptoglossus dilaticollis.

Leptoglossus dilaticollis, Guér. Voy. Coq., Ins. p. 174, Atlas, t. 12. f. 9; Stål, En. Hem. i. p. 161. 1[1].

Hab. Guatemala, Senahu (*Champion*).—Brazil[1].

2. Leptoglossus concolor.

Anisoscelis concolor, Walk. Cat. Het. iv. p. 128. 26[1].

Hab. Mexico, Oaxaca[1].

The colour of the upper surface of the abdomen in this species is concolorous, a character which appears to distinguish it from *L. fulvicornis*, Hope. It also appears to have a considerable affinity to *L. corculus*, Say; but Walker describes the rostrum of *L. concolor* as extending only to the second ventral segment, whilst Mayr in his description of *Theognis excellens*, which is accepted by both Stål and Uhler as a synonym of Say's species, states that the rostrum is "ad abdominis segmenti 4 basin extensum."

3. Leptoglossus phyllopus.

Cimex phyllopus, Linn. Syst. Nat. i. 2, p. 731. 113; Fabr. Syst. Ent. p. 708. 56; Goeze, Ent. Beytr. ii. p. 224. 113; Fabr. Spec. Ins. ii. p. 351. 80; Mant. Ins. ii. p. 289. 99.

Lygæus phyllopus, Fabr. Ent. Syst. iv. p. 139. 17; Syst. Rhynch. p. 210. 25; Wolff, Ic. Cim. v. p. 196, f. 190.

Anisoscelis albicinctus, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 326. 2[1].

Anisoscelis phyllopus, Burm. Handb. ii. 1, p. 332. 5.

Anisoscelis phyllopa, Hope, Cat. Hem. ii. p. 16[2].

Anisoscelis confusa, Dall. List Hem. ii. p. 453. 4[3].

Theognis phyllopus, Mayr, Reise d. Nov., Hem. p. 103.

Leptoglossus albicinctus, Stål, Hem. Fabr. i. p. 52. 5.

Leptoglossus phyllopus, Stål, En. Hem. i. p. 161. 3[4]; Uhler, Hayden's Surv. Mont. pt. iv. Zool. & Bot. p. 400[5]; Bull. U.S. Geol. & Geog. Surv. ii. p. 298[6]; Proc. Bost. Soc. Nat. Hist. xix. p. 383. 3[7]; Town. Glover, Ill. Ins. Ord. Hem. p. 44, t. 1. f. 21.

Hab. North America, Missouri[6], Carolina[2 4], Florida[1 3 7], Louisiana[6], Texas[4 5 6], Arizona[6].—Mexico[4 6], Yucatan, Valladolid (*Gaumer*); British Honduras, river Sarstoon (*Blancaneaux*); Guatemala, San Gerónimo (*Champion*); Costa Rica (*Van Patten*), Irazu (*Rogers*).—Brazil[3].

Townend Glover states that this "insect feeds on and destroys other insects. A

correspondent, Mr. E. T. Earle, of Evergreen, S. C., June 1869, wrote a letter to the department, in which he stated that he caught this insect destroying the cabbage-plant bug, *Strachia (Murgantia) histrionica*." According to Say, as quoted by Glover, the male of this species has only two denticulations on the dilated edge of the posterior tibiæ, whilst the female has three. This, however, according to my own observation, is not constant; and in a female specimen now before me the right tibia has three denticulations, whilst the left one has but two.

4. **Leptoglossus zonatus.** (Tab. XII. fig. 16.)

Anisoscelis zonata, Dall. List Hem. ii. p. 452. 3[1].

Leptoglossus zonatus, Stål, En. Hem. i. p. 162. 6[2]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 298. 2[3].

Hab. North America, California[3], Arizona[3].—Mexico[1 2 3] (*coll. Sallé*), Yucatan, Valladolid (*Gaumer*); Guatemala, San Isidro, El Reposo, Cerro Zunil, San Gerónimo (*Champion*); Costa Rica (*Van Patten*).

5. **Leptoglossus stigma.**

Cimex stigma, Herbst, Gem. Naturg. vi. p. 258, t. 39 B. f. 1.

Hypselonotus scriptus, Hahn, Ic. ad Mon. Cim. i. p. 5.

Anisoscelis scripta, Hope, Cat. Hem. ii. p. 16; Dall. List Hem. ii. p. 452. 1[1].

Anisoscelis indocta, Hope, Cat. Hem. ii. p. 16[2].

Anisoscelis serrulatus, H.-S. Wanz. Ins. vii. p. 11, ff. 687 & 688[3]; Guér. in Sagra, Hist. de Cuba, Ins. p. 386[4].

Anisoscelis minor, Dall. List Hem. ii. p. 452. 2[5].

Theognis scriptus, Mayr, Reise d. Nov., Hem. p. 101.

Leptoglossus stigma, Stål, En. Hem. i. p. 163. 10[6].

Stoll, Pun. ff. 54 & 70.

Hab. Mexico[6]; British Honduras[1]; Guatemala, Teleman, Capetillo (*Champion*).—Cuba[4]; South America[3]; Colombia[1 5 6]; Guiana, Demerara[2]; Brazil[1 5 6], Para[1].

The Guatemalan specimens agree with the form described by Dallas under the name of *A. minor*.

6. **Leptoglossus cinctus.**

Anisoscelis cincta, H.-S. Wanz. Ins. iii. p. 91. f. 315[1]; Dall. List Hem. ii. p. 454. 11[2].

Leptoglossus cinctus, Stål, En. Hem. i. p. 164. 15[3].

Hab. Mexico[3]; Guatemala, San Gerónimo, Cubulco (*Champion*).—Colombia[2 3]; Brazil[1 3].

In the Guatemalan specimens the corium is unicolorous, and does not possess the pale, transverse, median fascia as described and figured by Herrich-Schäffer. This variability was also remarked by Stål, who writes "Fasciola pallida corii sæpe deest."

7. **Leptoglossus lineosus.** (Tab. XII. fig. 17.)

Theognis lineosus, Stål, Stett. ent. Zeit. xxiii. p. 295. 153[1].

Leptoglossus lineosus, Stål, En. Hem. i. p. 164. 16[2].

Hab. MEXICO [1 2].

8. **Leptoglossus subauratus,** n. sp. (Tab. XII. fig. 18.)

Above dark castaneous, sparingly pilose; head with three longitudinal lines, one central and two lateral. Antennæ, margins and a broad central fascia (crescentic anteriorly) to pronotum, a central longitudinal line to scutellum, nervures, claval, costal, and apical margins and a median transverse fascia to corium, and a row of subquadrate spots on connexivum at ventral incisures luteous. Body beneath dark castaneous; head with a longitudinal line on each side near eyes, sternum with three oblique narrow fasciæ (first near costæ, ill-defined and obscure, second extending to posterior margin of metasternum, and third and outer semicircular) on each side of ventral incisures, two ill-defined longitudinal fasciæ on each side and a central longitudinal broken fascia on disk of abdomen, anterior and intermediate legs luteous. Antennæ strongly pilose, first and third joints subequal, fourth smooth, thickened, and slightly longer than third, second longest, half as long again as first. Pronotum regularly and finely punctate; posterior femora ochraceous, with the apex fuscous, and an inner apical row of strong spines; posterior tibiæ luteous, dilated on each side before the middle, dilated portion black, with a small luteous spot on inner margin, which is also provided with two or three small teeth.

Long. 14–18 millim.

Hab. GUATEMALA, Capetillo (*Champion*); NICARAGUA, Chontales (*coll. Dist.*).

Allied to *L. lineosus*, Stål, from which it differs in the more angulated dilatation of the posterior tibiæ, and the different colour of the antennæ, pronotum, &c.

9. **Leptoglossus gonagra.**

Cimex gonagra, Fabr. Syst. Ent. p. 708. 57; Goeze, Ent. Beytr. ii. p. 241. 23; Fabr. Spec. Ins. ii. p. 352. 82; Mant. Ins. ii. p. 289. 101; Gmel. Syst. Nat. i. 4, p. 2143. 236.

Cimex grallator, Herbst, Gem. Naturg. vi. p. 239. 12, t. 39 B. f. 2.

Lygæus gonagra, Fabr. Ent. Syst. iv. p. 140. 19; Syst. Rhynch. p. 210. 27.

Anisoscelis antica, H.-S. Wanz. Ins. iii. p. 92. f. 316[1]; Dall. List Hem. ii. p. 453. 7.

Anisoscelis gonagra, Burm. Handb. ii. 1, p. 332. 4[2]; Hope, Cat. Hem. ii. p. 16; Dall. List Hem. ii. p. 453. 6[3]; Guér. in Sagra's Hist. de Cuba, Ins. p. 387[4].

Theognis gonager, Mayr, Reise d. Nov., Hem. p. 103.

Leptoglossus gonagra, Stål, Hem. Fabr. i. p. 51. 1; En. Hem. i. p. 165. 17[5]; Berg, Hem. Argent. p. 72. 89[6].

Stoll, Pun. f. 73.

Hab. MEXICO [3 5]; BRITISH HONDURAS [3], river Sarstoon (*Blancaneaux*); GUATEMALA, San Gerónimo, San Isidro (*Champion*).—CUBA [4]; BRAZIL [1 3 5], Minas Geraës [5], Bahia [2], Rio Janeiro [2]; ARGENTINE REPUBLIC [6].

NARNIA.

Narnia, Stål, Stett. ent. Zeit. xxiii. p. 294 (1862); Öfv. Vet-Ak. Förh. 1867, p. 544; En. Hem. i. p. 166 (1870).

This genus is very closely allied to the preceding. The characters on which Stål seems to have principally relied are—the shorter basal joint of the antennæ (which is

only about equal to the anteocular portion of the head) and the great length of the fourth joint of the rostrum. *Narnia* is both Neotropical and Nearctic, one species being found in Central America, and another in Texas. This is the present extent of the genus.

1. **Narnia femorata.** (Tab. XIII. fig. 4.)

Narnia femorata, Stål, Stett. ent. Zeit. xxiii. p. 296. 154[1]; En. Hem. i. p. 166. 1[2].

Hab. Mexico [1 2] (*coll. Sign.*); Guatemala, San Gerónimo (*Champion*).

In his description Stål does not mention the presence of a white spot on the inner dilatation of the posterior tibiæ, which is present in a Mexican specimen forwarded to me by Dr. Signoret, and also in two specimens from Guatemala, one of which is here figured.

Division **LEPTOSCELARIA.**

Leptoscelidida, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 545.
Leptoscelidina, Stål, En. Hem. i. p. 167 (1870).
Leptoscelaria, Berg, Hem. Argent. p. 73 (1879).

This second division of the Coreinæ is distinguished from the preceding in having the posterior tibiæ simple. The femora are spined beneath. Four genera are comprised in this division, all of which are Neotropical. Three of these are found in Central America, one of which extends into the Nearctic Region, the fourth, according to our present knowledge, being confined to the Amazonian and Colombian subregions.

LEPTOSCELIS.

Leptoscelis, Laporte, Ess. Hém. p. 31 (1832); Stål, Stett. ent. Zeit. xxiii. p. 294 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 545.

In this genus the abdominal spiracles are considerably wider apart at the base than at the apex of the abdomen. The apical angle of the corium is somewhat elongated and produced, but not beyond the basal half of the membrane. About a dozen species are known as belonging to this truly Neotropical genus, of which one only has been received from Central America:—

1. **Leptoscelis tricolor.** (Tab. XIII. fig. 5.)

Leptoscelis tricolor, Hope, Cat. Hem. ii. p. 17[1]; Stål, En. Hem. i. p. 168. 5[2].

Hab. Panama (*coll. Dist.*).—Colombia, Bogota [2].

The locality from which Hope's type [1] was received is not recorded.

PHTHIA.

Phthia, Stål, Stett. ent. Zeit. xxiii. p. 294 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 545.

Phthia differs principally from the preceding genus in having the abdominal spiracles only slightly wider apart at the base than at the apex of the abdomen. This is a

Neotropical genus just entering the Nearctic Region; two species are known from Central America.

1. Phthia lunata.

Cimex lunatus, Fabr. Mant. Ins. ii. p. 289. 107; Gmel. Syst. Nat. i. 4, p. 2143. 241.
Lygæus lunatus, Fabr. Ent. Syst. iv. p. 142. 25; Syst. Rhynch. p. 212. 36 [1].
Coreus lunatus, Latr. in Humb. et Bonpl. Obs. Zool. i. p. 187. 31, t. 17. fig. 9 [2].
Leptoscelis rubro-picta, Hope, Cat. Hem. ii. p. 17 [3].
Leptoscelis lunatus, A. & S. Hist. des Hém. p. 219. 2 [4].
Anisoscelis fastuosus, H.-S. Wanz. Ins. vii. p. 8, f. 684 [5].
Leptoscelis fastuosa, Dall. List Hem. ii. p. 455. 1 [6].
Leptoscelis lunata, Dall. List Hem. ii. p. 455. 2 [7]; Marshall, Proc. Ent. Soc. 1878, p. xxxv. [8]
Anisoscelis (*Leptoscelis*) *lunatus*, Guér. in Sagra's Hist. de Cuba, Ins. p. 388 [9].
Phthia lunata, Stål, Hem. Fabr. i. p. 53; En. Hem. i. p. 169. 1 [10].
Phthia fastuosa, Stål, Hem. Fabr. i. p. 53.
Phthia concinna, Walk. Cat. Het. iv. p. 132. 10 [11].
Stoll, Pun. f. 71.

Hab. Mexico [7 10 11], Orizaba [11]; Guatemala, Balheu (*Champion*); Nicaragua, Chontales (*coll. Dist.*); Costa Rica, Cache (*Rogers*); Panama (*Boucard*).—Cuba [4 9 10]; St. Vincent [3]; Martinique [8]; Colombia [7 9], Bogota [10]; Guiana, Surinam [10], Cayenne [1]; Ecuador, Guayaquil [2]; Brazil [5 6 7 10], Para [10], Rio Janeiro [10].

2. Phthia picta.

Cimex pictus, Drury, Ins. i. p. 107, t. 45. f. 1 [1].
Cimex ciliatus, Fabr. Syst. Ent. p. 706. 46; Goeze, Ent. Beytr. ii. p. 239. 15; Fabr. Spec. Ins. ii. p. 348. 63; Mant. Ins. ii. p. 286. 72; Gmel. Syst. Nat. i. 4, p. 2140. 217; Fabr. Ent. Syst. iv. p. 103. 93; Syst. Rhynch. p. 164. 47.
Cimex leprosus, Fabr. Syst. Ent. p. 719. 112; Goeze, Ent. Beytr. ii. p. 257. 15; Fabr. Spec. Ins. ii. p. 364. 155; Mant. Ins. ii. p. 299. 201; Gmel. Syst. Nat. i. 4, p. 2171. 390.
Cimex candelabrum, Goeze, Ent. Beytr. ii. p. 254. 2.
Cimex crenulatus, Fabr. Spec. Ins. ii. p. 353. 90; Mant. Ins. ii. p. 290. 114; Gmel. Syst. Nat. i. 4, p. 2144. 248.
Lygæus crenulatus, Fabr. Ent. Syst. iv. p. 144. 33.
Lygæus leprosus, Fabr. Ent. Syst. iv. p. 154. 65; Syst. Rhynch. p. 222. 82.
Lygæus dispar, Fabr. Syst. Rhynch. p. 214. 43.
Alydus crenulatus, Fabr. Syst. Rhynch. p. 250. 11.
Leptoscelis picta, Hope, Cat. Hem. ii. p. 17.
Anisoscelis divisus, H.-S. Wanz. Ins. vii. p. 9, f. 685 [2].
Anisoscelis pulverulentus, H.-S. Wanz. Ins. vii. p. 9 [3].
Leptoscelis picta, Dall. List Hem. ii. p. 457. 7 [4].
Leptoscelis obscura, Dall. List Hem. ii. p. 458. 9 [5].
Anisoscelis (*Leptoscelis*) *annulipes*, Guér. in Sagra's Hist. de Cuba, Ins. p. 388 [6].
Phthia picta, Stål, Hem. Fabr. i. p. 53. 1; En. Hem. i. p. 170. 6 [7]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 299 [8]; Berg, Hem. Argent. p. 73. 91 [9].

Hab. NORTH AMERICA, Texas [8], Lower California [8].—CENTRAL AMERICA [8]; MEXICO [3 7] (*coll. Sallé*), Yaqui river [8]; GUATEMALA, San Gerónimo, Dueñas, Zapote, San Juan (*Champion*); HONDURAS [4]; COSTA RICA, Irazu (*Rogers*).—WEST INDIES [4 8], Cuba [6 7 8], Antigua [1]; COLOMBIA [5 7], Bogota [7]; GUIANA, Cayenne [5]; BRAZIL [2 7 8], Para [7], Madeira, river Amazons (*coll. Dist.*), Rio Janeiro [7]; ARGENTINE REPUBLIC [9].

This species, as the extent of the synonymy would indicate, is very variable in its colour and markings. Prof. Uhler, who has had opportunity of examining fresh or living specimens of the insect, remarks, "In the fresh full-coloured varieties the bright orange bands of the pronotum contrast richly with the vivid steel-blue of the ground-colour." This variable character existing in the northern forms of the species is also recorded from its extreme southern area. Berg examined thirty-three Argentine specimens, and remarks upon their variability of coloration, especially on the pronotum and abdomen.

AMBLYOMIA.

Amblyomia, Stål, En. Hem. i. p. 171 (1870).

I have not seen an example of this genus. The differences which separate *Amblyomia* from *Phthia* are, as described by Stål, the rounded and non-prominent lateral angles of the pronotum, and "pedibus posticis crassioribus, brevioribus, tibiis posticis femoribus brevioribus, tarsisque crassioribus et brevioribus divergens." Only one species is enumerated, which is here included.

1. Amblyomia bifasciata.

Amblyomia bifasciata, Stål, En. Hem. i. p. 172. 1 [1].

Hab. MEXICO [1].

This species is to me quite unknown; and I have been unable to see or obtain a drawing of the type, as Dr. Aurivillius has written to me:—"*Amblyomia bifasciata* is not to be found in our Museum. The words '(Mus. Holm.)' in the 'Enumeratio' may be incorrect, or the type may be lost."

Division SPARTOCERARIA.

Spartoceridæ, Dall. List Hem. ii. p. 369 (1852).
Spartocerida, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 545.
Spartocerina, Stål, En. Hem. i. p. 172 (1870).
Spartoceraria, Berg, Hem. Argent. p. 75 (1879).

This division at present comprises five Neotropical genera, the area of a very few species being extended into the Southern Nearctic Region. The femora are slender and rarely spined; the head is quadrate and emarginate in front, with the antenniferous

tubercles prominent and forming the anterior superior extremities of the lateral lobes of the head. The abdomen is usually ampliated on each side.

SPARTOCERA.

Spartocera, subg. *Spartocera,* Laporte, Ess. Hém. p. 43 (1832).
Spartocerus, Burmeister, Handb. ii. 1, p. 341 (1835).
Spartocera, Dallas (part.), List Hem. ii. p. 370 (1852).
Spartocera, Stål, Ofv. Vet.-Ak. Förh. 1867, p. 546.
Corecoris, Hahn, Wanz. Ins. ii. p. 14 (1834).
Coreocoris, Spinola, Ess. Hém. p. 150 (1837).

In this genus the posterior margin of the metasternum is rounded, the nervures of the membrane are numerous and reticulated, and the rostrum has the base strongly incrassated. Probably about twelve species really belong to this genus, all of which are Neotropical, with the exception of *Spartocera diffusa*, Say, which is a purely Nearctic form of the genus, unless Prof. Uhler (Bull. U. S. Geol. & Geogr. Surv. ii. p. 291) is correct in considering it a synonym of *S. cinnamomea*, Hahn, in which case, however, Say's name should take precedence. Hahn's species, with this exception, has not been recorded north of the Brazilian subregion; nor have I received a specimen from Central America, though Prof. Uhler writes that it inhabits Mexico. Again, Townend Glover (Ill. Ins. Ord. Hem. p. 68) considers *S. diffusa* a synonym of *S. fusca*, Thunb. If this is correct, the difficulty is removed, as *S. fusca* is a common Central-American form. As some error is here at least probable, I have not included Say's insect either as a species or variety in this fauna. Two species have alone passed through my hands, which have been received from Central America.

1. **Spartocera granulata.** (Tab. XIII. fig. 6.)

Spartocera granulata, Stål, En. Hem. i. p. 173.

Hab. Costa Rica (*van Patten*), Volcan de Irazu (*Rogers*); Panama (*Boucard; coll. Dist.*).

The locality whence the type of this species was received is unknown. The Central-American specimens agree well with Stål's description. In some of the Costa-Rican forms the colour of the pronotum is dark fuscous, a peculiarity not observed in those received from Panama, of which one is here figured.

2. **Spartocera fusca.**

Cimex fuscus, Thunb. Nov. Ins. Spec. ii. p. 44.
Reduvius mœstus, Fabr. Ent. Syst. iv. p. 198. 19.
Coreus mœstus, Fabr. Syst. Rhynch. p. 193. 8[1].
Spartocerus geniculatus, Burm. Handb. ii. 1, p. 342. 2[2]; H.-S. Wanz. Ins. vi. p. 89, f. 660[3].
Spartocerus serrulatus, H.-S. Wanz. Ins. vi. pp. 12 & 90, f. 568[4].

Spartocerus lateritius, Hope, Cat. Hem. ii. p. 7 [5].
Spartocerus affinis, Hope, Cat. Hem. ii. p. 7 [6].
Spartocera geniculata, A. & S. Hist. des Hém. p. 186. 1 [7].
Spartocera mœsta, Dall. List. Hem. ii. p. 374. 8 [8].
Spartocera mœsta, Stål, Stett. ent. Zeit. xxiii. p. 273. 118 [9].
Coreus (*Spartocera*) *geniculatus*, Guér. in Sagra's Hist. de Cuba, Ins. p. 378 [10].
Spartocera fusca, Stål, Hem. Fabr. i. p. 54. 1; En. Hem. i. 174 (excl. *C. confluentus*, Say) [11]; Berg, Hem. Argent. p. 76. 94 [21].

Hab. MEXICO [9 11] (*coll. Sallé*); GUATEMALA, Panzos, Senahu, Dueñas (*Champion*); NICARAGUA, Chontales (*coll. Dist.*); COSTA RICA (*van Patten*), Irazu (*Rogers*).—CUBA [10 11]; JAMAICA [8]; ST. VINCENT [5]; GUADELOUPE [1]; ST. BARTHÉLEMY [11]; COLOMBIA [11], Bogota [11]; GUIANA, Cayenne [7]; BRAZIL [3 4 6 8 11], Para [2], Minas Geraës [11], Bahia [2], Rio Janeiro [11]; ARGENTINE REPUBLIC [12].

SEPHINA.

Sephina, Amyot & Serville, Hist. des Hém. p. 185 (1843); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 546.
Spartocera, Dall. (part.), List Hem. ii. p. 370 (1852).

Sephina differs from *Spartocera* in having the posterior margin of the metasternum straight; the nervures of the membrane are furcate; the disk of the pronotum is convex, depressed anteriorly; and the base of the rostrum is much less incrassated.

This is a purely Neotropical genus, one species alone being recorded as just entering the Nearctic Region. About one half of the genus is peculiar to Central America; and the species seem to possess neither wide expanse of range nor variability of character.

1. **Sephina bicornis**, n. sp. (Tab. XIII. fig. 7.)

Black, lateral angles of pronotum with adjoining moieties of lateral and basal margins both above and beneath, two discoidal pronotal tubercles, apical half of scutellum, basal margins of corium both above and beneath, apex of abdomen above and beneath, a spot situated on apex of apical segment, base of anal appendage, and three spots on each side of sternum, situated near anterior, intermediate, and posterior coxæ, red. Connexivum with a segmental row of large luteous spots, which form a marginal series to abdomen beneath.

Antennæ pilose, first and second joints subequal in length, third shortest, and fourth slightly longest. Pronotum obscurely punctate, lateral margins finely denticulate, lateral angles prominent, subacute, slightly directed hindwards, and deeply sinuate posteriorly; discoidal tubercles obtusely subconical and moderately prominent. Corium very faintly and obscurely punctate; clavus more clearly and deeply punctate.

Long. 19 millim., lat. pronot. ang. 8 millim.

Hab. GUATEMALA, Senahu (*Champion*).

This species is allied to *S. pustulata*, Fabr., and forms with that species, in the common character of discoidal tubercles to the pronotum, a distinct section of the genus. It differs from the Fabrician species by the much less sinuated and rounded lateral margins of the pronotum, the less developed discoidal tubercles, and the absence of the two discoidal spots on corium.

2. **Sephina geniculata,** n. sp. (Tab. XIII. fig. 10.)

Black; pronotum with the anterior margin (narrowly), the lateral margins, apical portion of the posterior margin and a central longitudinal fascia, apical half of scutellum, and costal margins of corium, red; a rounded luteous spot on disk of corium, and a number of irregular spots of the same colour on membrane. Abdomen above with the apical half red, connexivum with a segmental row of luteous spots. Underside of body black, mottled with reddish; margins and lateral angles of prosternum red, a testaceous spot near base of each coxa, and a lateral abdominal row of testaceous spots situated near stigmata. Legs black, apices of femora and bases of tibiæ luteous.

Antennæ with the first and second joints subequal in length, third a little shorter than fourth, second and third joints strongly sulcated above.

Long. 16 millim., lat. pronot. ang. 6 millim.

Hab. Costa Rica, Cache (*Rogers*).

This is a very distinct form of the genus, and is not readily to be confused with any other species. One specimen only was received from Mr. Rogers.

3. **Sephina rogersi,** n. sp. (Tab. XIII. fig. 9.)

Black, finely pilose; a semicircular fascia on disk of pronotum, commencing on each side at base, a little before lateral angles, and extending subparallel to lateral margins and narrowing and obscurely meeting a little before anterior margin, and basal margins of corium red. Abdomen above red; connexivum testaceous, with a segmental row of black spots. Underside of body red; rostrum, legs, anterior margin and a transverse spot on disk of prosternum, anterior fourth of mesosternum, a large spot near posterior coxæ, abdomen with a row of broad discal transverse segmental fasciæ, sometimes semidivided, anal appendage (wholly in ♂, base only in ♀), stigmata, and a marginal segmental row of quadrate spots black.

Antennæ pilose, second joint a little longer than first, third and fourth subequal; pronotum with a few scattered coarse punctures, the lateral margins very strongly pilose, lateral angles prominent and subacute; corium very finely and obscurely punctate, clavus more distinctly punctate.

Long. ♂ 21 millim., ♀ 25 millim.; lat. pronot. ang. ♂ 7 millim., ♀ 9 millim.

Hab. Costa Rica, Cache (*Rogers*).

This species is allied to *S. limbata*, Stål, from which it differs by the more prominent lateral angles of the pronotum, the red fascia not extending thereto, and the spotted connexivum, &c.

4. **Sephina limbata.** (Tab. XII. fig. 22.)

Sephina limbata, Stål, Stett. ent. Zeit. xxiii. p. 273. 117[1]; En. Hem. i. p. 177. 8[2]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 291[3].

Sephina atra, Walk. Cat. Het. iv. p. 4. 7[4].

Hab. North America, Lower California[3].—Mexico[1 2 4] (*coll. Sign.*; *coll. Sallé*); Brit. Honduras, river Sarstoon (*Blancaneaux*); Guatemala, Panzos, Chacoj (*Champion*).

I have examined Walker's type in the British Museum, and find that it is not a varietal form of this species, as the name and description would imply, the red fascia to the pronotum being present, but obscure, owing to the specimen being somewhat discoloured. As far as my experience goes, the species is quite constant in character.

The specimen figured is from Guatemala.

5. **Sephina vinula.** (Tab. XII. fig. 23.)

Sephina vinula, Stål, Stett. ent. Zeit. xxiii. p. 273. 116 *a* [1]; En. Hem. i. p. 177. 7 [2].
Spartocera lampyroides, Walk. Cat. Het. iv. p. 6. 12 [3].

Hab. Mexico [2], Vera Cruz [1], Oaxaca [3] (*coll. Dist.*).

The type in the collection of Dr. Signoret is here figured.

6. **Sephina dorsalis.** (Tab. XIII. fig. 8.)

Spartocerus dorsalis, White, Trans. Ent. Soc. iii. p. 92 [1].
Spartocera dorsalis, Dall. List Hem. ii. p. 373. 4 [2]; Stål, En. Hem. i. p. 175. 9.

Hab. Mexico [1 2].

The figure is from a typical specimen in the British Museum.

Division **CHARIESTERARIA.**

Chariesterida, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 546.
Chariesterina, Stål, En. Hem. i. p. 178 (1870).

In this division, which comprises three Neotropical genera, all found in Central America, and one extended in its area to the Nearctic Region, the antenniferous tubercles are produced and spined or dentate internally, the femora are spined, and the third joint of the antennæ dilated.

CHARIESTERUS.

Chariesterus, Laporte, Ess. Hém. p. 44 (1832); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 546.

Chariesterus has the antenniferous tubercles very strongly produced and acuminate, the basal joint of the antennæ strongly incrassated, and the lateral angles of the pronotum produced and spinous. The genus is not numerous in species; but these have a wide habitat: Rio Janeiro in the south and the United States in the north are well authenticated localities.

1. **Chariesterus alternatus,** n. sp. (Tab. XIII. fig. 13.)

Brownish testaceous, finely pilose; head with a narrow basal margin and a broader longitudinal streak on each lateral lobe black; legs luteous; antennæ with the basal joint scabrous and luteous, second joint about subequal in length to first, luteous, and narrowly and obscurely blackish at apex, third joint broadly dilated on each side, fuscous, with the base narrowly and obscurely blackish (fourth joint wanting). Pronotum with the lateral angles produced, distinctly spinous at apex and deeply sinuated posteriorly, and terminating with two small and somewhat indistinct spines near posterior margin. Scutellum with the apex luteous. Membrane cupreous. Connexivum alternately luteous and black. Underside of body and legs paler and redder; abdomen with the margin alternately black and luteous, and with five longitudinal rows of black spots, one central and four lateral (two on each side). Rostrum blackish, with the apices of the joints narrowly luteous.

Long. 11½ millim.

Hab. Mexico, Cuernavaca (*Bilimek, Mus. Vind. Cæs.*).

Allied to *C. antennator*, Fabr., from which it differs principally by the different structure of the lateral angles of the pronotum.

2. **Chariesterus albiventris.** (Tab. XIII. fig. 11.)

Chariesterus albiventris, Burm. Handb. ii. 1, p. 317. 4[1]; Stål, En. Hem. i. p. 178. 3[2].

Hab. Mexico (*Mus. Berol.*), Oaxaca [1 2].

The figure is taken from a typical specimen in the collection of the Berlin Museum. In a second Mexican example the white pubescence of the underside of the body is absent.

3. **Chariesterus mœstus.** (Tab. XIII. fig. 12.)

Chariesterus moestus, Burm. Handb. ii. 1, p. 317. 5[1]; Stål, En. Hem. i. p. 179. 5[2].
Chariesterus mœstus, Dall. List Hem. ii. p. 511. 3[3].

Hab. Mexico [2 3] (*Mus. Berol.*), Oaxaca [1], Orizaba (*Bilimek, Mus. Vind. Cæs.*); Guatemala, San Gerónimo (*Champion*).—Venezuela [3].

I have examined an extraordinary specimen of this insect, contained in the Vienna Museum, in which the antennæ are asymmetrical, the left antenna having the third and dilated joint completely absent. One specimen from Guatemala has the underside covered with white pubescence, a character which, as seen in the previous species, appears to be either purely varietal or else absent by being frequently rubbed and worn off.

A Mexican specimen in the collection of the Berlin Museum is here figured.

PLAPIGUS.

Plapigus, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 473; ib. 1867, p. 546.

Plapigus differs principally from *Chariesterus* by the head being furnished with a distinct callosity near the eyes; the antenniferous tubercles are much less produced, and the apices are not acuminate; the basal joint of the antennæ is only moderately incrassated, but thickened near the apex, and is longer than the second joint.

Only one species is at present known from Central America.

1. **Plapigus circumcinctus.** (Tab. XIII. fig. 14.)

Plapigus circumcinctus, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 473. 3[1]; En. Hem. i. p. 179. 5[2].

Hab. Mexico [1 2] (*Mus. Berol.*), Orizaba (*Bilimek, Mus. Vind. Cæs.*); Guatemala, San Isidro, Chiacam, Panima (*Champion*).

The type in the Berlin Museum, which I have examined, has the head, as described by Stål, luteous. This I believe to be a variable character, as a Mexican specimen in the Vienna Museum, and a long series from Guatemala, one of which is here figured, have the head either black, or more or less clothed with yellowish pubescence.

STALUPTUS.

Staluptus, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 473; ib. 1867, p. 546.

This genus differs from the preceding in having a distinct collar to the thorax, and the first and second joints of the antennæ subequal in length. The anterior angles of the pronotum are moderately and subacutely produced. But one species is at present recorded.

1. **Staluptus marginalis.** (Tab. XIII. fig. 15.)

Staluptus marginalis, Burm. Handb. ii. 1, p. 317. 3[1]; Stål, En. Hem. i. p. 180. 1[2].

Hab. Mexico[1] (*Mus. Berol., coll. Sign.*), Oaxaca[2], Cuernavaca (*Bilimek, Mus. Vind. Cæs.*); Guatemala, San Gerónimo (*Champion*).

A Guatemalan specimen is figured.

Division **COREARIA.**

Coreida, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 547.
Coreina, Stål, En. Hem. i. p. 180 (1870).
Corearia, Stål, En. Hem. iii. p. 37 (1873).

In this division the characters relied upon by Stål are—"Spiraculis fere æque longe a basi et ab apice segmentorum ventris vel saltem ab apice quam a basi nunquam duplo longius distantibus."

This is the largest group of the Neotropical Coreinæ. A few of the genera are found in the Nearctic Region; and about three fifths of the whole number are recorded from Central America.

MADURA.

Madura, Stål, Rio Jan. Hem. i. p. 35 (1860); Öfv. Vet.-Ak. Förh. 1867, p. 547.

This genus at present comprises three species—one from Rio Janeiro, another from Venezuela, and a third from Mexico. It is more than probable that many other species exist, and that the habitat of those described may be more extensive, as from their small size these insects can be readily overlooked. One of the principal characteristics of the genus is the long antennæ, with the basal joint clavate and the fourth very incrassate.

1. **Madura perfida.** (Tab. XIII. fig. 16.)

Madura perfida, Stål, Stett. ent. Zeit. xxiii. p. 304. 181[1]; En. Hem. i. p. 180. 2[2].

Hab. Mexico[1 2].

The type, in the collection of Dr. Signoret, is here figured.

CHELINIDEA.

Chelinidea, Uhler, Proc. Ent. Soc. Philad. ii. p. 365 (1863).
Xiphares, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 551.

This distinct and peculiar genus is at once recognized from all its congeners by the length of the head and that of the pronotum being equal, as in the Mexican species, or subequal in length as in the Nearctic form described by Prof. Uhler, which two species at present are alone recorded. The body is broad and ovate.

1. **Chelinidea tabulata.** (Tab. XIII. fig. 17.)

Gonocerus tabulatus, Burm. Handb. ii. 1, p. 311. 2[1].
Chelinidea tabulata, Stål, En. Hem. i. p. 181. 2[2].

Hab. Mexico [1 2] (*Mus. Berol.*), Puebla (*Bilimek, Mus. Vind. Cæs.*).

The specimen figured is a typical one, contained in the Berlin Museum.

ACIDOMERIA.

Acidomeria, Stål, En. Hem. i. p. 182 (1870).

The head is triangular, a little longer than broad, with the central lobe prominent; the apical angle of the corium is somewhat produced, and the apical margin sinuated; the femora are armed with one or two spines beneath; and the body is subovate.

Four species have been described by Stål as belonging to this genus—one from Uruguay, two from unknown localities, and the other from Mexico. It is probably a truly Neotropical genus. I know of no record of it from the Southern Nearctic Region.

1. **Acidomeria rustica.** (Tab. XII. fig. 11.)

Acidomeria rustica, Stål, En. Hem. i. p. 182. 1[1].

Hab. Mexico, Oaxaca [1].

The figure is from a typical specimen in the Stockholm Museum.

MARGUS.

Margus, Dallas, List Hem. ii. p. 523 (1852); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 549.

Margus is distinguished from *Acidomeria* by the corium having the apical margin straight and the apical angle not produced. The nervures of the membrane are reticulated. This is another Neotropical genus, of which about a dozen species are known; three of these are found in Central America, of which one also extends its area to the Southern Nearctic Region.

1. **Margus inconspicuus.**

Syromastes inconspicuus, H.-S. Wanz. Ins. vi. p. 14, f. 570[1].

Margus inconspicuus, Stål, Stett. ent. Zeit. xxiii. p. 303. 177[2]; Hem. Fabr. i. p. 58. 1; En. Hem. i. p. 184. 1[3]; Uhler, Hayden's Surv. Mont. pt. iv. Zool. & Bot. p. 401[4]; Bull. U.S. Geol. & Geog. Surv. ii. p. 292[5]; ib. iii. p. 405[6]; Town. Glover, Ill. Ins. Ord. Hem. p. 47, t. vi. f. 17[7].

Hab. NORTH AMERICA, Texas [4 5 7], Colorado [4 5 6], California [4 5], Arizona [6 7]. — MEXICO [1 2 3 4 5] (*Mus. Berol.*, *Mus. Vind. Cæs.*, *coll. Dist.*); GUATEMALA, Dueñas, Quezaltenango (*Champion*).

Prof. Uhler[6] remarks upon the variation in depth of colour and markings in the Nearctic forms; the same character is very observable in Guatemalan specimens.

2. **Margus inornatus.** (Tab. XIII. fig. 18.)

Margus inornatus, Stål, Stett. ent. Zeit. xxxiii. p. 304. 179[1]; En. Hem. i. p. 185. 5[2].

Hab. MEXICO [1 2].

A typical specimen, in the collection of Dr. Signoret, is here figured.

3. **Margus obscurator.**

Coreus obscurator, Fabr. Syst. Rhynch. p. 200. 41.

Margus impudens, Stål, Rio Jan. Hem. i. p. 37. 1[1]; Stett. ent. Zeit. xxiii. p. 303. 178[2].

Margus obscurator, Stål, Hem. Fabr. i. p. 57. 1, & p. 58. 4; En. Hem. i. p. 185. 8[3]; Berg, Hem. Argent. p. 81. 100[4].

Hab. MEXICO [2 3], Chapultepek (*Bilimek*, *Mus. Vind. Cæs.*).—COLOMBIA [3]; BRAZIL [3], Rio Janeiro [1 3]; ARGENTINE REPUBLIC [4].

This species is easily separable from the two preceding by having the apices of the antenniferous tubercles spinous externally.

NAMACUS.

Namacus, A myot & Serville, Hist. des Hém. p. 242 (1843); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 547.

Dirnalus, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 454.

Namacus is at once distinguished from the preceding genus *Margus* by the non-reticulated nervures of the membrane. The body is oblong and subelongate.

Three species are enumerated—two from Guiana and one from Mexico.

1. **Namacus annulicornis.** (Tab. XIV. fig. 8.)

Namacus annulicornis, Stål, En. Hem. i. p. 186. 3[1].

Hab. MEXICO [1].

A typical male specimen, in the Stockholm Museum, is here figured.

CATORHINTHA.

Catorhintha, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 470; ib. 1867, p. 549.

The area of this genus is both Nearctic and Neotropical, apparently extending from the southern portion of the first region to about the Amazonian subregion of the latter.

The ocelli are separated from each other by about twice the distance that divides them respectively from the eyes; and near the last the head has a distinct callosity. The body is linear or suboblong.

1. **Catorhintha mendica.** (Tab. XIII. fig. 21.)

Catorhintha mendica, Stål, En. Hem. i. p. 187. 2[1]; Uhler, Hayden's Surv. Mont. pt. iv. Zool. & Bot. p. 401[2]; Bull. U.S. Geol. & Geog. Surv. ii. p. 292[3]; ib. iii. p. 405[4].

Hab. North America, Texas [1 2], Colorado [2 3 4], Lower California [2], Florida [2], New Mexico [2].—Mexico [1]; Guatemala, El Jicaro (*Champion*).—Cuba [2].

Of this insect Prof. Uhler [4] remarks that Dr. Packard obtained it near Golden, Colorado, in July, but when he reached that locality in August he was unable to find specimens, and therefore thinks it likely that the season for its appearance was then over.

2. **Catorhintha selector.** (Tab. XIII. fig. 19.)

Catorhintha selector, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 471. 3[1]; En. Hem. i. p. 188. 4[2]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 292. 3[3].

Hab. North America, Arizona [3], Texas [3], New Mexico [3].—Mexico [1 2] (*Mus. Berol.*, *Mus. Vind. Cæs.*).

The specimen figured is a Mexican one, contained in the collection of the Vienna Museum.

FICANA.

Ficana, Stål, Stett. ent. Zeit. xxiii. p. 303 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 548; En. Hem. i. p. 188 (1870).

Ficana was founded for the reception of one Mexican species. It is closely allied to the preceding, as Stål observes, "Hoc genus *Catorhinthæ* est maxime affine, differt capite longiore, bucculis paullo brevioribus, rostro longiore, coxas posticas attingente." It is at least doubtful whether the institution of this genus will prove of much classificatory value.

1. **Ficana apicalis.** (Tab. XIV. fig. 1.)

Gonocerus apicalis, Dall. List Hem. ii. p. 499. 19[1].

Ficana apicalis, Stål, En. Hem. i. p. 188. 1[2]; Uhler, Hayden's Surv. Mont. pt. iv. Zool. & Bot. p. 401[3]; Bull. U.S. Geol. & Geog. Surv. ii. p. 292[4].

Hab. North America, Arizona [3 4], California [3 4].—Mexico [1 2 4] (*Mus. Berol.*, *coll. Sign.*), Tacubaya (*Bilimek*), Plason (*Mus. Vind. Cæs.*).

A Mexican specimen is figured, contained in the collection of the Berlin Museum, and represents the typical form of the species, in which the last joint of the antennæ is luteous. To this was attached the MS. name *indagator*. A varietal form, however, seems most abundant, in which the apical joint of the antennæ has only the apex luteous. This form is also contained in the Berlin Museum, and was sent to me labelled *scrutator*.

CIMOLUS.

Cimolus, Stål, Stett. ent. Zeit. xxiii. p. 302 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 548; En. Hem. i. p. 188, note (1870).

Cimolus differs at once from the two preceding genera by the more ovate body. The rostrum is short, scarcely passing the anterior coxæ, the first joint being only about half the length of the head. It is very closely allied to the following genus (*Anasa*). Two species are at present recorded—one from the Nearctic Region, the other from Central America.

1. **Cimolus vitticeps.** (Tab. XIII. fig. 22.)

Cimolus vitticeps, Stål, Stett. ent. Zeit. xxxiii. p. 302. 174[1]; En. Hem. i. p. 189. 1[2].

Hab. Mexico[1 2] (*Sichel, Mus. Vind. Cæs.*), Orizaba (*Bilimek, Mus. Vind. Cæs.*); British Honduras, Belize (*Blancaneaux*); Guatemala, Zapote, Senahu, Las Mercedes (*Champion*).

This species differs much in the shade of coloration, some specimens, especially those from Guatemala, being almost black above; these have also the lateral margins of the pronotum less denticulated. This last character is not, however, sufficiently uniform to warrant me in considering it specific, the difficulty being increased by one female Guatemalan specimen having the rostrum a little longer than is usual in the genus, while it differs in no other respect from other specimens of this species.

The specimen figured is a typical Mexican one in the collection of Dr. Signoret.

ANASA.

Oriterus, Hahn, Wanz. Ins. i. p. 8 (1831), sine descript.
Anasa, Amyot & Serville, Hist. des Hém. p. 209 (1843); Stål, Ofv. Vet.-Ak. Förh. 1867, p. 548.
Lagaria, Dallas, List Hem. ii. p. 442 (1852).

This genus principally differs from the preceding by the greater length of the rostrum, the first joint of which reaches, or nearly reaches, the base of the head. Its area extends from the southern portion of the Nearctic, throughout the whole Neotropical Region. It is well represented in Central America.

1. **Anasa tristis.**

Cimex tristis, De Geer, Mém. iii. p. 340. 14, t. 34. f. 20; Goeze, Ent. Beytr. ii. p. 269. 83.
Cimex mœstus, Gmel. Syst. Nat. i. 4, p. 2168. 374; Tigny, Hist. des Ins. ed. 2, iv. p. 275.

Coreus rugator, Fabr. Syst. Rhynch. p. 192. 4[1].
Oriterus destructor, Hahn, Wanz. Ins. i. p. 8, f. 2[2].
Coreus ordinatus, Say, Journ. Acad. Nat. Sci. Philad. iv. p. 318. 2[3]; Compl. Writ. ii. p. 244. 2.
Coreus tristis, Jaeger, Life N. Am. Ins. p. 115, t. iv. f. 20.
Gonocerus rugator, Burm. Handb. ii. 1, p. 311. 4[4].
Gonocerus tristis, Dall. List Hem. ii. p. 499. 17[5].
Coreus (*Gonocerus*) *tristis*, Packard, Guide to Study Ins. p. 545. f. 549.
Anasa tristis, Stål, Hem. Fabr. i. p. 56. 3; En. Hem. i. p. 189. 1[6]; Uhler, Hayden's Surv. Mont. pt. iv. Zool. & Bot. p. 401[7]; Bull. U.S. Geol. & Geog. Surv. ii. p. 292. 1[8]; ib. iii. p. 406[9]; Proc. Bost. Soc. Nat. Hist. xix. p. 385[10]; Cook, Inj. Ins. Michigan, p. 12; Riley, 2nd Report 1869, p. 31 &c.; Town. Glov. Ill. Ins. Ord. Hem. p. 22.

Hab. North America[1 2 3 4 6 7 10], Texas[6], East Florida[5], Colorado[9], California[8], Arizona[8].—Mexico[7 8]; British Honduras[5].

I include this species in the Central-American fauna on the authority of Dallas[5] and Uhler[7 8]. The last author also gives the name of L. Provancher as a recorder of this insect near Quebec, and likewise states that it is found in Brazil. I have, however, seen no specimens from that region, nor have I been able to find any other reference to the same. Uhler[7] remarks that southern and western individuals occasionally exhibit a wonderful degree of variability in the shape of the pronotum, and that "specimens occur which have the lateral margins of that part either distinctly sinuated, with the humeri quite prominent, or the reverse, with the sides bowed and the humeri broadly rounded." This would almost appear to apply to the characters relied upon by Stål for the separation of the following species, *A. uhleri*. The same author critically and well remarks on the variation of the "size of the punctures of the surface in conformity with its own dimensions—those which are largest being most coarsely punctured, while those which are smallest are the most finely punctured." I have myself observed this in the Cydninæ.

This is the destructive insect known throughout the United States as the "Squash-bug," owing to its depredations on the squash-vines. It is for these qualities that its habits have been studied; and we know as much of its life-history and economy as we do at present of any other American Heteropteron. According to Glover the eggs are "said to be round, flattened on sides, and of a metallic brown colour, deposited in little patches, fastened with a gummy substance to the underside of the leaves of squashes and other Cucurbitaceæ, in June, July, &c., until late autumn. These eggs are not all deposited at one time on the plants, but in successive broods, during the whole season. The larvæ, pupæ, and perfect insects all indiscriminately attack the leaves and cause them to wither up by sucking out the sap, and appear to poison the foliage. They moult their skins several times before attaining the perfect or winged state, and become more oval in form as they grow older; and as successive broods throughout the summer they do much injury to squash- and pumpkin-vines. These insects sometimes collect in

masses around the stem near the earth, and injure the plant itself by extracting its sap with their piercers. They also give out an odour similar to that of an overripe pear." On this point Prof. Verrill has found, with the assistance of Prof. Johnson, of Yale College, that the odour of this and other hemipterous insects bears the most resemblance to that of the formate of oxide of amyl, or the formate of amylic ether (Proc. Bost. Soc. Nat. Hist. xi. p. 160). The perfect insect hibernates during the winter, according to Jaeger, "in the crevices of houses, walls, and the bark of trees;" and Prof. Uhler [9] relates it being found beneath rubbish on one of the farms in Colorado in the month of August. The last author states that "in the larval stage they are often guilty of cannibalism; the stronger ones sucking the juices of the weaker, and leaving only their dried empty skins to attest their places upon the squash-vines."

2. **Anasa uhleri.** (Tab. XIII. fig. 23.)

Anasa uhleri, Stål, Hem. Fabr. i. p. 57. 2; En. Hem. i. p. 190. 2 [1].

Hab. Mexico [1].

It is at least questionable whether this species is not included by Prof. Uhler as a variety of *A. tristis*. Stål describes *A. uhleri* as having the posterior lateral margins of the pronotum obtuse, not sinuated; and, as already quoted, Prof. Uhler remarks upon this peculiarity in varietal forms of the other species. However, Prof. Uhler wrote subsequent to the publication of Stål's description; and as he is clearly quite conversant with the writings of that author, and does not treat *A. uhleri* as a synonym of *A. tristis*, I have, though unable to examine a large series of specimens of the common North-American insect, treated the two forms here as distinct species.

3. **Anasa andresii.**

Coreus (*Gonocerus*) *andresii*, Guér. in Sagra's Hist. de Cuba, Ins. p. 383, t. 13. f. 9 [1].
Anasa lugens, Stål, Stett. ent. Zeit. xxiii. p. 301. 173 [2].
Anasa andresii, Stål, En. Hem. i. p. 190. 3 [3]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 293. 2 [4].

Hab. North America, Texas [3 4], Southern Florida [4], New Mexico [4].—Mexico [2 3 4], Orizaba (*Bilimek*, *Mus. Vind. Cæs.*); Guatemala, San Gerónimo, Capetillo, Zapote (*Champion*); Costa Rica (*Van Patten*), Irazu (*Rogers*); Panama (*coll. Dist.*).—Cuba [1 3 4]; Colombia (*Nothên*, *Mus. Vind. Cæs.*).

This is not only a variable species in size, but also in the colour of the upper surface of the abdomen, which, as remarked by Stål, and strikingly exemplified by a large series of Guatemalan specimens, is sometimes testaceous and often black with two pale, somewhat obsolete discal spots. The apical joint of the antennæ is either totally ochraceous, as in all the Guatemalan specimens examined, or, according to Stål, the apex only is of that colour.

4. **Anasa bellator.**

Cimex bellator, Fabr. Mant. Ins. ii. p. 286. 73; Gmel. Syst. Nat. i. 4. p. 2141. 218.
Coreus bellator, Fabr. Ent. Syst. iv. p. 128. 5; Syst. Rhynch. p. 194. 13[1].
Gonocerus puncticornis, H.-S. Wanz. Ins. vii. p. 12, f. 689[2].
Lagaria bellator, Dall. List Hem. ii. p. 443. 3[3].
Coreus (*Anasa*) *puncticornis*, Guér. in Sagra's Hist. de Cuba, Ins. p. 379.
Anasa bellator, Stål, Stett. ent. Zeit. xxiii. p. 300. 168[4]; Hem. Fabr. i. p. 56. 1; En. Hem. i. p. 191. 8[5].

Hab. MEXICO[4 5] (*coll. Sign.*); GUATEMALA, Zapote, San Isidro, Paraiso (*Champion*); NICARAGUA, Chontales (*coll. Dist.*).—CUBA[2]; GUADELOUPE[5]; COLOMBIA, Bogota[5]; VENEZUELA[3]; GUIANA, Cayenne[1]; BRAZIL[3], Madeira river, Amazons (*coll. Dist.*).

5. **Anasa scorbutica.**

Cimex scorbuticus, Fabr. Syst. Ent. p. 706. 47; Goeze, Ent. Beytr. ii. p. 239. 16; Fabr. Spec. Ins. ii. p. 349. 65; Mant. Ins. ii. p. 286. 75 (1787); Gmel. Syst. Nat. i. 4, p. 2141. 220.
Coreus scorbuticus, Fabr. Ent. Syst. iv. p. 129. 9; Syst. Rhynch. p. 195. 18.
Acanthocerus nebulosus, P. B. Ins. p. 205, Hém. t. 12. f. 6.
Anasa mœsta, Dall. List Hem. ii. p. 505. 2[1].
Coreus (*Anasa*) *mœsta*, Guér. in Sagra's Hist. de Cuba, Ins. p. 380[2].
Anasa spiniceps, Stål, Stett. ent. Zeit. xxiii. p. 300. 169[3].
Anasa scorbutica, Stål, Hem. Fabr. i. p. 56. 2; En. Hem. i. p. 192. 11[4]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 293. 4[5]; Berg, Hem. Argent. p. 82. 102[6].

Hab. NORTH AMERICA, Texas[5], Southern Florida[5].—MEXICO[3] (*coll. Sign.*); GUATEMALA, San Gerónimo, Las Mercedes (*Champion*); COSTA RICA (*Van Patten*).—CUBA[2 4]; JAMAICA[1]; COLOMBIA[1]; ARGENTINE REPUBLIC[6].

This species would appear to have an extremely wide range, if no mistake has been made by Berg[6], who includes it in the Argentine fauna, and who writes:—"Un individuo ♂, que recojí en el Territorio de las Misiones Antiguas, corresponde á las descripciones existentes, principalmente á las que dan Stål y Dallas" etc.

6. **Anasa tauriformis,** n. sp. (Tab. XIV. fig. 6.)

Above black, sparingly pilose. Antennæ with the first and second joints subequal, third and fourth joints shorter and subequal, apical joint luteous with the base fuscous. Head with a long and strong spine at base of antennæ. Pronotum strongly punctate and subrugose, with the lateral angles produced into long obtuse spines strongly directed forwards and slightly upwards; anterior half of pronotum brownish. Scutellum and corium sparingly but coarsely punctate; basal half of costal margin of corium and connexivum luteous. Underside of body, rostrum, and femora ochraceous; apices of femora, tibiæ, tarsi, stigmata, four longitudinal rows of spots to abdomen (two central ones transverse, lateral rows rounded), and underside of pronotal spines black. Sternum coarsely punctate, abdomen and legs pilose.
Long. 13 millim.

Hab. COSTA RICA, Cache (*Rogers*).

7. **Anasa notatipennis.** (Tab. XIII. fig. 24.)

Anasa notatipennis, Stål, Stett. ent. Zeit. xxiii. p. 300. 170[1]; Hem. Fabr. i. p. 57. 12; En. Hem. i. p. 193. 16[2].

Hab. MEXICO[1 2] (*coll. Sign.*).

8. **Anasa lita,** n. sp. (Tab. XIII. fig. 25.)

Ochraceous; antenniferous tubercles, apex and longitudinal fascia at base of head, lateral pronotal angles, central longitudinal fascia to scutellum, a narrow and indistinct oblique discal streak on corium, base of membrane, lateral margins of head beneath, a broad oblique fascia on each side of sternum placed near coxæ, a central fascia on mesosternum and metasternum, underside of pronotal angles, a transverse central fascia on first abdominal segment, a broad fascia on each side of apical segment, anal appendage, apical half of posterior femora and apical joint of tarsi black. Antennæ black, with the bases of second and third, and apices of third and fourth joints luteous; first and fourth joints incrassated, first and third subequal in length, second longer than third, fourth shortest. Pronotum and corium coarsely punctate; lateral angles of pronotum moderately produced and obtusely spinous, lateral margins deeply sinuated; scutellum transversely striated with a few coarse punctures. Connexivum luteous, with a segmental row of subquadrate testaceous spots. Underside of body testaceous; base of head, disk of sternum, coxæ, legs, posterior disk and lateral margins of abdomen luteous.

Long. 11–13 millim., lat. pronot. angl. 4–5 millim.

Hab. Guatemala, San Gerónimo (*Champion*).

Allied to *A. notatipennis*, Stål, but differs by the much less produced pronotal angles, basal joint of antennæ more incrassated, and different colour, markings, &c.

9. **Anasa litigiosa.** (Tab. XIV. fig. 2.)

Anasa litigiosa, Stål, Stett. ent. Zeit. xxiii. p. 301. 171 [1]; Hem. Fabr. i. p. 57. 13; En. Hem. i. p. 193. 17 [2].

Hab. Mexico [1], Vera Cruz [2].

A typical specimen in the collection of Dr. Signoret is here figured.

10. **Anasa madida,** n. sp. (Tab. XIV. fig. 3.)

Dull testaceous; head and antennæ ochraceous, lateral and anterior margins of pronotum bluish green. Antennæ with the joints about subequal in length; pronotum finely punctate, more coarsely so on anterior and lateral margins, lateral angles moderately produced and slightly directed upwards, with the apices obtusely acute, lateral margins deeply sinuate; scutellum transversely striate, with a few scattered punctures; corium thickly punctate with the lateral margins narrowly and obscurely luteous; connexivum ochraceous, with a segmental row of subquadrate fuscous spots. Underside of body brighter testaceous; prosternum, disk of mesosternum and metasternum, bases of trochanters, and apex of abdomen bluish green; underside of head, rostrum, and legs ochraceous. Sternum coarsely punctate.

Long. 15 millim., lat. pronot. ang. 5 millim.

Hab. Costa Rica, Irazu, river Sucio (*Rogers*).

Allied to the two preceding species; but, besides the different coloration, the shape of the pronotum is sufficiently distinct.

11. **Anasa maculipes.** (Tab. XIV. fig. 4.)

Anasa maculipes, Stål, Stett. ent. Zeit. xxiii. p. 299. 166 [1]; Hem. Fabr. i. p. 57. 14; En. Hem. i. p. 193. 18 [2].

Hab. Mexico [1 2] (*Mus. Berol.*), Orizaba (*Bilimek, Mus. Vind. Cæs.*).

The figure is from the type in the collection of Dr. Signoret. A specimen examined

from the collection of the Berlin Museum was labelled *occultus*, which is clearly a manuscript name.

12. **Anasa conspersa.** (Tab. XIV. fig. 5.)

Anasa conspersa, Stål, Stett. ent. Zeit. xxiii. p. 299. 165[1]; Hem. Fabr. i. p. 57. 16; En. Hem. i. p. 194. 19[2].

Hab. Mexico[1 2] (*Bilimek & Sichel, Mus. Vind. Cæs., Mus. Berol.*); Guatemala, Capetillo, Dueñas (*Champion*).

A Mexican specimen in the collection of the Berlin Museum is here figured. This agrees with a typical specimen forwarded to me by Dr. Signoret, save in the colour of the upper surface of the abdomen, which in Dr. Signoret's specimen and in those from the Vienna Museum is testaceous with the apex red, whilst those received from Guatemala agree with the Mexican specimen in the Berlin Museum in having the abdomen above black with some rather obscure luteous marks on disk. This I estimate, from a like divergence in other species, as a variable character only. In the typical specimen, and in all others examined, the fuscous markings on the underside of the abdomen form four indistinct longitudinal vittæ, two discal and two lateral.

13. **Anasa ruficornis.**

Anasa ruficornis, Stål, En. Hem. i. p. 194. 20[1].

Hab. Mexico[1].

14. **Anasa capaneodes.** (Tab. XIII. fig. 20.)

Anasa capaneodes, Stål, Stett. ent. Zeit. xxiii. p. 299. 167[1]; Hem. Fabr. i. p. 57. 15; En. Hem. i. p. 194. 21[2].

Hab. Mexico[1 2]; Guatemala, Teleman, San Isidro (*Champion*).

15. **Anasa costalis.** (Tab. XII. fig. 21.)

Anasa costalis, Stål, En. Hem. i. p. 194. 22[1].

Hab. Mexico, Oaxaca[1] (*coll. Sign., Bilimek, Mus. Vind. Cæs.*); Guatemala, San Gerónimo (*Champion*).

A typical specimen in the Stockholm Museum is here figured.

16. **Anasa subobscura,** n. sp.

Allied to *A. costalis*, Stål, but differs in having the costal margin of the corium concolorous, and the underside of the body dark fuscous; apical joint of the antennæ shorter, more incrassated, and with the apical half luteous; basal joint fuscous, second and third joints ferruginous and subequal; legs pale luteous and unspotted; abdomen above black, with the apex of the second, the whole of the third and fourth, and central base of the fifth segments luteous.

Long. 11–15 millim.

Hab. Mexico (*coll. Sallé*); Guatemala, San Gerónimo, Sabo (*Champion*).

17. **Anasa impictipes.** (Tab. XII. fig. 20.)

Anasa impictipes, Stål, En. Hem. i. p. 195. 23[1].

Hab. Mexico [1].

The figure is from a typical specimen in the Stockholm Museum.

18. **Anasa flavo-vittata,** n. sp. (Tab. XIV. fig. 7.)

Ochraceous, coarsely and darkly punctate. Antennæ pale greenish, thickly spotted with fuscous; first and third joints subequal and a little shorter than second (fourth wanting). Head and anterior third of pronotum remotely punctate, the punctures concolorous; lateral pronotal angles prominent, subfoliaceous, with the apices subacute. Pronotum and scutellum with a central longitudinal pale levigate line. Membrane pale fuscous, with irregular and darker spots. Connexivum luteous, with a quadrate fuscous spot on last segment. Underside of body and legs luteous; lateral margins of sternum broadly brownish and coarsely punctate; lateral margins of abdomen broadly testaceous and more obscurely punctate, extreme lateral margin of abdomen luteous; anal appendage black. Legs very obscurely and finely spotted with fuscous.
Long. 11 millim.

Hab. Costa Rica, Caché (*Rogers*).

Somewhat allied in general shape and form to *A. costalis.*

19. **Anasa peregrina,** n. sp.

Bronzy green; head, antennæ, rostrum, legs, disk of sternum, and connexivum luteous; abdomen above and below testaceous, with the apical segment and abdominal appendage very dark greenish. Antennæ with the second joint longest, first a little shorter than third and subequal with fourth. Pronotum and scutellum sparingly but deeply and coarsely punctate; pronotal angles subprominent, obtusely pointed and slightly sinuated posteriorly. Corium sparingly and deeply punctate, but less coarsely than the pronotum and scutellum. Sternum, excluding disk, deeply and coarsely punctate. Rostrum reaching intermediate coxæ, with the apex slightly fuscous.
Long. 11 millim.

Hab. Costa Rica (*coll. Dist.*).

20. **Anasa mucronata,** n. sp. (Tab. XIV. fig. 9.)

Testaceous, legs luteous. Antennæ with the basal joint luteous, second pale testaceous; these joints subequal in length (third and fourth wanting). Pronotum much depressed anteriorly, punctate and rugulose, with a central longitudinal levigate line; lateral angles prominent, subfoliaceous, with the apices acutely spinous, somewhat directed upwards and forwards. Scutellum and corium coarsely punctate. Membrane cupreous. Abdomen above testaceous. Sternum, excluding disk, coarsely punctate.
Long. 13 millim.

Hab. Mexico, Paso de Mayo (*Bilimek, Mus. Vind. Cæs.*).

This is a very distinct and peculiar species.

21. **Anasa nigripes.** (Tab. XII. fig. 19.)

Anasa nigripes, Stål, Hem. Fabr. i. p. 57. 17[1]; En. Hem. i. p. 196. 26[2].

Hab. Mexico [1 2].

A typical specimen in the Stockholm Museum is here figured.

22. **Anasa denticulata.** (Tab. XIV. fig. 11.)

Anasa denticulata, Stål, En. Hem. i. p. 196. 27[1].

Hab. Mexico [1] (*coll. Dist.*).

23. **Anasa tenebricosa,** n. sp. (Tab. XIV. fig. 12.)

Dark fuscous. Antennæ with the three basal joints obscure testaceous, spotted with fuscous; fourth joint fuscous, annulated near apex with ochraceous; first and fourth joints much incrassated, second and third subequal in length. Pronotum distinctly and somewhat coarsely punctate, with the lateral angles subprominent, ampliated, and rounded; lateral margins ampliated and reflexed, obscurely dentate anteriorly. Membrane dark cupreous. Connexivum black, with a segmental row of luteous spots. Underside of body concolorous, head and sternum paler and coarsely punctate; femora spotted with black; tibiæ ochraceous, obscurely spotted with fuscous; abdomen with a marginal row of ochraceous spots.
Long. 10 millim.

Hab. Costa Rica, Irazu (*Rogers*).

Allied to *A. denticulata,* Stål, but differs by the less denticulated margins of the pronotum, the second and third joints of the antennæ being subequal in length, its darker colour, &c.

ZICCA.

Zicca, Amyot & Serville, Hist. des Hém. p. 240 (1843); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 547.

This Neotropical genus is represented in Central America by three species. *Zicca* has the posterior femora somewhat incrassated and spined beneath. The basal joint of the antennæ is longer than the second joint; and the lateral angles of the pronotum are acutely produced.

1. **Zicca commaculata,** n. sp. (Tab. XIV. fig. 19.)

Luteous, distinctly punctate. Antennæ, margins of ocelli, a transverse spot at base of head between ocelli and eyes, pronotum with the lateral margins, a central spot near anterior margin, and posterior half from between lateral spines to base, scutellum and corium fuscous. Membrane black. Underside of body and legs luteous; sternum with six black spots on each side, two on prosternum (outer one on margin somewhat obsolete), two on mesosternum, and two on metasternum; abdomen with four longitudinal rows of black spots on disk and a marginal row of the same colour; femora luteous, coarsely spotted and annulated with black; tibiæ fuscous, distinctly annulated near middle, and more obscurely spotted near base with luteous. Abdomen above testaceous, with a submarginal row of black spots above the position of stigmata, and connexivum with a row of subquadrate black spots occupying apical halves of segmental margins. Antennæ with the basal joint longest, second and third joints subequal, fourth shortest and incrassated. Pronotum with the lateral margins faintly and obscurely crenulated; lateral angles produced into long acute black spines; posterior lateral margins behind spines distinctly spinous, from which to posterior angles they are deeply sinuate; posterior angles distinct and subacute; the posterior and fuscous portion is waved anteriorly, where it is much darker. Apex of scutellum narrowly luteous.
Long. 9 millim., lat. pronot. ang. 4 millim.

Hab. Guatemala, Cahabon (*Champion*).

This species belongs to the section of the genus in which the connexivum is not unicolorous, but maculated. It is at once separated from *Z. annulata,* Burm., and

Z. consobrina, Stål, by the colour of the antennæ. It is most closely allied to *Z. nigropunctata*, De Geer, from which it structurally differs in having sinuated lateral margins to the pronotum, between the lateral spines and the posterior angles.

2. **Zicca tæniola.** (Tab. XIV. fig. 13.)

Clavigralla tæniola, Dall. List Hem. ii. p. 514. 8[1].
Coreus (Zicca) delicatulus, Guér. in Sagra's Hist. de Cuba, Ins. p. 384[2].
Zicca tæniola, Stål, Stett. ent. Zeit. xxxiii. p. 299. 164[3]; En. Hem. i. p. 199. 6[4].

Hab. MEXICO [3 4] (*Mus. Vind. Cæs.*); GUATEMALA, Capetillo, San Gerónimo (*Champion*); HONDURAS [4]; COSTA RICA, Caché (*Rogers*).—CUBA [2 4]; COLOMBIA [4]; VENEZUELA [1].

3. **Zicca recurva,** n. sp.

Closely allied to the preceding species, but with the apices of the pronotal angles slightly directed backwards, and not forwards as in *Z. tæniola*. Fuscous portions darker in hue; tibiæ distinctly annulated with black.

Long. 8–9 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

VILGA.

Vilga, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 474.
Centrocoris, Fieber, Eur. Hem. p. 60 (1861).

This peculiar and interesting genus, founded by Stål for the reception of *Clavigralla acanthion*, Dall., a species received from Para, is here augmented by a second Neotropical species, in which the somewhat abnormal characters are even more pronounced. These characters, distinguishing it from *Zicca*, are principally and superficially the spinous condition of the basal joint of the antennæ, of the lateral margins and angles of the pronotum, the margins of the abdomen, and femora.

A third and Palæarctic species is known from the Persian subregion.

1. **Vilga dallasi,** n. sp. (Tab. XIV. fig. 16.)

Pale fuscous; second and third joints of antennæ, tibiæ, and tarsi pale ochraceous. Basal joint of antennæ incrassated and strongly spined; first and second joints subequal in length, second shorter than third, fourth shortest and thickened. Head furnished with a long slightly recurved spine on each side, a little behind the insertion of the antennæ. Pronotum with the lateral angles acutely produced and armed with strong spines on each side, several like spines on each lateral margin and two on disk. Costal margins of corium and connexivum spinous, the last most strongly so. Femora spinous; tibiæ serrated. Rostrum just passing intermediate coxæ.

Long. 9–10 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

COLLATIA.

Collatia, Stål, Stett. ent. Zeit. xxiii. p. 298 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 547.

Collatia differs from *Zicca* in having the basal joint of the antennæ shorter than the second. The pronotal angles are ampliated and sinuated.

Three species of this genus are now described, all of which are from Central America.

1. **Collatia emarginata.** (Tab. XIV. fig. 14.)

Collatia emarginata, Stål, Stett. ent. Zeit. xxiii. p. 298. 163[1]; En. Hem. i. p. 199. 1[2].

Hab. Mexico [1 2]; Guatemala, Capetillo, Cubilguitz (*Champion*).

The figure is from a typical Mexican specimen in the collection of the Stockholm Museum.

2. **Collatia jubata,** n. sp. (Tab. XIV. fig. 15.)

Collatia emarginata, Stål, var. ?

Closely allied to *C. emarginata*, Stål, but differs by the more elongate body and the greater elevation of the central longitudinal ridge to pronotum. The apex of the scutellum is not pale luteous, but apparently concolorous.

Long. 9 millim.

Hab. Mexico, Orizaba (*Bilimek, Mus. Vind. Cæs.*).

I have described this species from a single specimen in the Vienna Museum with considerable hesitation, as, though the structural differences between it and *C. emarginata* are considerable, as the artist has fully shown in the two figures, I have observed a tendency in Guatemalan specimens to vary in this particular, and shall not be surprised if eventually it prove to be but a varietal form. In the absence of intermediate forms, I have been compelled to separate it.

3. **Collatia divergens,** n. sp. (Tab. XIV. fig. 17.)

Above luteous, more or less covered with brownish punctures. Antennæ with the first joint pale luteous, second and third joints somewhat darker, particularly at apices; apical joint testaceous; first and third joints subequal in length, second longest. Head obscurely punctate, with the central lobe somewhat raised and prominent. Pronotum somewhat thickly covered with brownish punctures; lateral margins (which are strongly spinous) and a raised central longitudinal ridge on anterior portion of disk pale luteous; lateral angles produced, their apices terminating in acute spines, which are slightly directed upwards and forwards, deeply sinuated behind. Scutellum with the basal half sparsely punctate, from which it is densely and darkly punctate to the apex, which is pale and levigate. Corium somewhat thickly covered with brown punctures, excepting about middle, where it is obscurely levigate, almost indicating a pale transverse fascia. Connexivum pale luteous, with a series of large subquadrate brown spots, which are spotted with fuscous on margin. Underside of body pale luteous, with two small transverse streaks between posterior coxæ, two small rounded spots on disk of second segment, two transverse oblong spots on disk and basal margin of third segment, a small round spot on sides of fourth and fifth segments, and abdominal margin with a row of obscure spots, fuscous. Legs luteous; apices of femora pale testaceous; coxæ and bases of femora with a few fuscous spots; tibiæ spotted with testaceous; rostrum about reaching posterior coxæ, with the apex pitchy.

Long. 9 millim.

Hab. Mexico (*Bilimek, Mus. Vind. Cæs.*).

This species differs from the two preceding in the acutely pointed and forwardly-directed lateral angles of the pronotum. In most other respects it is closely allied to *C. emarginata*.

NIROVECUS.

Nirovecus, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 454.

One species of this genus is alone known at present, and appears to be peculiar to Central America.

It is at once distinguished from the preceding genus (*Collatia*) by the non-prominent lateral angles of the pronotum. From the following genus (*Cebrenis*) it is separable by the spinous condition of the posterior femora.

1. **Nirovecus claviger.** (Tab. XIV. fig. 18.)

Nirovecus claviger, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 455. 1[1]; En. Hem. i. p. 199. 1.

Hab. Mexico (*Mus. Berol.*[1]); Guatemala, Capetillo, Dueñas (*Champion*).

A Guatemalan specimen is figured which entirely agrees with a typical Mexican one in the Berlin Museum.

CEBRENIS.

Cebrenis, Stål, Stett. ent. Zeit. xxiii. p. 298 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 548.

This appears to be a truly Neotropical genus; of six described species three are found in Central America, two of which, as at present known, are peculiar to that region. The posterior femora are unarmed; and the fourth joint of the antennæ is incrassated and shorter than the preceding.

1. **Cebrenis centro-lineata.** (Tab. XIV. fig. 22.)

Hypselonotus centrolineatus, Hope, Cat. Hem. ii. p. 21[1].

Hypselonotus pulchellus, H.-S. Wanz. Ins. vii. p. 10, f. 686[2].

Cebrenis pulchella, Stål, Stett. Ent. Zeit. xxiii. p. 298. 162[3].

Cebrenis centro-lineata, Stål, Öfv. Vet.-Ak. Förh. 1862, p. 502; Mayr, Reise d. Nov. Hem. p. 113; Stål, En. Hem. i. p. 199. 1[4]; Berg, Hem. Argent. p. 86. 107[5].

Hab. Mexico[3 4], Chapul (*Bilimek, Mus. Vind. Cæs.*); Guatemala, San Gerónimo, Capetillo (*Champion*).—Brazil[1 2], Rio Janeiro[4]; Argentine Republic[5].

I have here figured a Guatemalan specimen, Herrich-Schäffer's figure being somewhat misleading in not having the pronotal angles prominent. This character also applies to the most southern form of the species, as Prof. Berg[5] remarks, "Los angulos laterales del pronoto son mas puntiagudos que los de la imagen." The colour is also different.

2. **Cebrenis robusta.** (Tab. XIV. fig. 20.)

Cebrenis robusta, Stål, En. Hem. i. p. 200. 5[1].

Hab. MEXICO[1]; GUATEMALA, Capetillo, San Gerónimo (*Champion*).

The figure is that of a Guatemalan specimen, which only differs from a typical Mexican one in the Stockholm Museum by the irregularly clouded base of the pronotum.

3. **Cebrenis modesta,** n. sp. (Tab. XIV. fig. 21.)

Pale ochraceous, coarsely punctate. Antennæ with the second and third joints longest and subequal in length, fourth darkest and incrassated. Pronotum with the lateral margins and an obscure central longitudinal levigate impression, apex of scutellum, lateral margin of corium, underside of body, and legs luteous. Abdomen above red, with some fuscous spots about centre of disk. Rostrum concolorous, slightly passing intermediate coxæ.

Long. 9 millim.

Hab. GUATEMALA, Capetillo, Guatemala city (*Champion*).

This species is allied to *C. robusta*, but differs from that species by the narrower form of the body, the straighter and less sinuated margins of the pronotum, the different colour of the upper surface of the abdomen, &c. In some specimens the disk of the corium is paler in hue, somewhat indicating a transverse fascia—a varietal character exhibited in many allied genera.

HYPSELONOTUS.

Hypselonotus, Hahn, Wanz. Ins. i. p. 186 (1831); Amyot & Serville, Hist. des Hém. p. 241 (1843); Dallas, List Hem. ii. p. 450, 1852; Stål, Öfv. Vet.-Ak. Förh. 1867, p. 548.

Hypselonotus differs from *Cebrenis* in having the third and fourth joints of the antennæ subequal in length, and the thorax provided with a distinct collar.

This is another purely Neotropical genus; and most of the described species are found in Central America. In a systematic sense the genus is an unsatisfactory one, the *differentiæ specificæ* being mostly of colour and markings, good structural differences being apparently absent; but if a broader view be taken, *Hypselonotus* is a genus still remaining in a plastic condition, its species exhibiting a constancy of character which is superficial rather than structural.

The species described by Walker, Cat. Het. iv. p. 144. 23, under the name of *Hypselonotus armatus* is merely a Mexican specimen of the genus *Nematopus*, which has been previously figured in this work.

1. **Hypselonotus punctiventris.** (Tab. XIV. fig. 23.)

Hypselonotus punctiventris, Stål, Stett. ent. Zeit. xxiii. p. 297. 161[1]; En. Hem. i. p. 201. 2[2].

Hab. MEXICO[1 2], Valladolid, Yucatan (*Gaumer*); GUATEMALA, San Gerónimo (*Champion*).

The type in the collection of Dr. Signoret is here figured. This is a very variable species: in the Guatemalan specimens now before me the longitudinal black striæ of

the pronotum are absent, or only obsoletely indicated; the apical joint of the antennæ in some specimens is almost completely fulvous; and in others the apex of the apical joint of the rostrum is alone black. The most distinctive and constant character is the series of black spots to the body beneath; and even these are sometimes somewhat indistinct.

2. **Hypselonotus intermedius,** n. sp.

Head luteous, with two short fuscous streaks in front of ocelli, and a spot of the same colour behind eyes. Antennæ fuscous, lower margin of basal joint and bases of second and third joints luteous; second joint much the longest; first, third, and fourth joints subequal in length. Pronotum with the lateral margins narrowly fuscous, the base with a broad margin of brown punctures, and with a central obscure longitudinal levigate impression. Scutellum brown, lateral margins and a central longitudinal line luteous, the brown portion punctate. Corium brown; nervures, claval margin, and a transverse fascia a little before apex luteous. Abdomen above testaceous; basal angles, a large spot on each side of fourth and fifth segments, apex, and anal appendage black. Connexivum testaceous, with a series of subquadrate black spots. Underside of body and legs pale greenish or luteous, a rounded spot on coxæ, a transverse streak on disk and near apical margin of third, fourth, and fifth segments, and annulations to femora and tibiæ black. Rostrum reaching posterior coxæ, black, with the basal joint luteous.
Long. 13–14 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

H. intermedius differs from *H. punctiventris* by the different-coloured rostrum, different black markings beneath, and is intermediate between that species and *H. lineatus*. It appears to be peculiar to Guatemala, and has only been sent from San Gerónimo. Two forms have been received—one as described, and the other with brownish markings darker in hue, and the transverse fuscous streaks on the underside of the abdomen also larger and darker. These differences are not sexual; nor can they be seasonal varieties, as they were collected by Mr. Champion at the same time.

3. **Hypselonotus lineatus.** (Tab. XIV. fig. 24.)

Hypselonotus lineatus, Stål, Stett. ent. Zeit. xxiii. p. 297. 160[1]; En. Hem. i. p. 201. 3[2].

Hab. MEXICO [1 2] (*coll. Sallé*), Valladolid, Yucatan (*Gaumer*); BRITISH HONDURAS, river Sarstoon (*Blancaneaux*).

A Mexican specimen is here figured, in which a transverse fascia to the corium is faintly indicated. In some specimens, as recorded by Stål, this fascia is very distinct.

4. **Hypselonotus fulvus.**

Cimex fulvus, De Geer, Mém. iii. p. 341. 16, t. 34. f. 22; Goeze, Ent. Beytr. ii. p. 269. 84.

Cimex striatulus, Fabr. Syst. Ent. p. 721. 122; Goeze, Ent. Beytr. ii. p. 258. 23; Fabr. Spec. Ins. ii. p. 366. 170; Mant. Ins. ii. p. 301. 223; Gmel. Syst. Nat. i. 4, p. 2173. 396.

Lygæus venosus, Fabr. Ent. Syst. iv. p. 142. 28; Syst. Rhynch. p. 213. 41[1].

Lygæus striatulus, Fabr. Ent. Syst. iv. p. 161. 91; Wolff, Ic. Cim. iii. p. 109, f. 103[2]; Fabr. Syst. Rhynch. p. 228. 118[3].

Hypselonotus dimidiatus, Hahn, Wanz. Ins. i. p. 189. f. 97[4].

Hypselonotus striatulus, Burm. Handb. ii. 1, p. 320. 1[5]; Blanch. Hist. des Ins. p. 126. 1, t. 4. f. 6[6]; Hope, Cat. Hem. ii. p. 21; A. & S. Hist. des Hém. p. 241. 1[7].

Hypselonotus fulvus, Dall. List Hem. ii. p. 464. 1[8]; Mayr, Reise d. Nov. Hem. p. 100[9]; Stål, En. Hem. i. p. 201. 4[10]; Berg, Hem. Argent. p. 86. 108[11].

Hypselonotus venosus, Stål, Hem. Fabr. i. p. 56. 1[12].

Hab. PANAMA (*coll. Dist.*).—COLOMBIA[8], Bogotá[10]; GUIANA[8], Cayenne[1 7 8], Demerara[8] (*coll. Dist.*); ECUADOR, Guayaquil[10]; BRAZIL[2 3 4 5 6 8 10], Pernambuco (*Forbes*), Rio Janeiro[9]; ARGENTINE REPUBLIC[11].

5. **Hypselonotus interruptus.** (Tab. XVI. fig. 1.)

Hypselonotus interruptus, Hahn, Wanz. Ins. i. p. 187. f. 96[1]; Burm. Handb. ii. 1, p. 320. 2[2]; A. & S. Hist. des Hém. p. 242, not.[3]; Dall. List Hem. ii. p. 465. 2[4]; Mayr, Reise d. Nov. Hem. p. 100[5]; Stål, En. Hem. i. p. 202. 5[6]; Berg, Hem. Argent. p. 87. 109[7].

Hypselonotus bilineatus, Hope, Cat. Hem. ii. p. 21[8].

Hypselonotus lineaticollis, Stål, Öfv. Vet.-Ak. Förh. 1855, p. 185. 1.

Hab. MEXICO[4].—BRAZIL[1 2 3 4 6 8], Minas Geraës[6], Rio Janeiro[5 6]; ARGENTINE REPUBLIC[7].

This species is here inserted on the authority of Mr. Dallas, who has given the habitat Mexico to an undoubted specimen of the species. It is a most variable species; and the specimen figured represents the *H. bilineatus*, Hope, which is also the Mexican form in the British Museum.

6. **Hypselonotus concinnus.** (Tab. XIV. figg. 25, 26.)

Hypselonotus concinnus, Dall. List Hem. ii. p. 465. 3[1]; Stål, Stett. ent. Zeit. xxiii. p. 297. 159[2]; En. Hem. i. p. 202. 6[3].

Hypselonotus propinquus, Walk. Cat. Hem. iv. p. 142. 18[4].

Hab. MEXICO[1 2] (*coll. Sallé*), Oaxaca[4]; BRITISH HONDURAS[1], river Sarstoon (*Blancaneaux*); GUATEMALA, city of Guatemala, San Gerónimo, Purula, Cubilguitz (*Champion*).—COLOMBIA, Bogota[3].

This is a most variable species; but in all the specimens which I have examined the scutellum is testaceous, and the central lævigate line to the pronotum always present. In some very dark specimens the femora are fuscous; but they are usually testaceous.

7. **Hypselonotus atratus,** n. sp. (Tab. XIV. fig. 27.)

Black; head red, with a basal black band above; pronotal collar, a large sublunate fascia to pronotum, commencing at lateral angles and continued along lateral margins, and meeting on disk a little before anterior margin, costal margin of corium, excluding apex, and two broad fasciæ on disk of corium, placed transversely, truncate above and rounded beneath, but not quite meeting, luteous. Body beneath testaceous; base of prosternum, base of and central fascia to meso- and metasternum, basal fasciæ to disks of abdominal segments, and legs, excluding coxæ, black; prosternal collar, bases of pro-, meso-, and metasternum, and discal apical halves of abdominal segments pale luteous. Rostrum black. Abdomen above testaceous, apical third more or less black. Joints of antennæ subequal in length, or third somewhat shortest.

Long. 12 millim.

Hab. Costa Rica, Irazu, Cache (*Rogers*).

This species differs from *H. concinnus* by the black scutellum, absence of central levigate line to pronotum, colour of the legs, and black markings beneath, and appears to take the place of Mr. Dallas's species in Costa Rica.

8. **Hypselonotus proxima,** n. sp.

Above black; head, a broad central longitudinal fascia to pronotum and scutellum, on pronotum joining a transverse fascia near anterior margin, which is abruptly deflexed on each side, and continued as a narrow submarginal fascia to near base, apical margins of clavus and corium luteous. Underside of body luteous, with a spot on each side of base of head, three longitudinal series of spots on each side of sternum (one at coxæ and two lateral), five longitudinal series to abdomen (one central and two lateral on each side), and two spots on abdominal margin at apices of third and fourth segments black. Femora luteous, strongly annulated with black; tibiæ and rostrum black, tarsi fuscous, with the two apical joints paler. Antennæ black, with the first, second, and fourth joints subequal in length, third a little shorter. Pronotum and corium finely but sparsely punctate, scutellum finely transversely striate.

Long. 12–13 millim.

Hab. Costa Rica, Irazu, Cache (*Rogers*); Panama (*Boucard*).—Amazons, Pebas (*coll. Dist.*).

This species is very closely allied to *H. linea*, Fabr., and in colour and markings above is inseparable. It is, however, at once distinguished by the spots to the body beneath, and by the much greater length of the basal joint of the antennæ than exists in the Fabrician species. In a Panama specimen the longitudinal series of spots to the sternum have become confluent and linear, the extreme apex of the corium being black.

SPHICTYRTUS.

Sphictyrtus, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 462; ib. 1867, p. 548; Berg, Hem. Argent. p. 88 (1879).

This genus is Neotropical, and fairly represented in Central America. Its most striking characteristics are the acute posterior angles of the metasternum. The rostrum reaches or passes the posterior coxæ, as defined by Stål, or the intermediate coxæ only, as proposed by Berg.

1. **Sphictyrtus pretiosus.** (Tab. XV. fig. 1.)

Paryphes pretiosus, Stål, Öfv. Vet.-Ak. Förh. 1854, p. 235. 3.

Sphictyrtus pretiosus, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 463. 6[1]; En. Hem. i. p. 203. 1[2].

Hab. Mexico [1 2], Jalapa (*Höge*).

This species is rendered very distinct by the luteous costal margin to the corium.

2. **Sphictyrtus intermedius,** var. (Tab. XV. fig. 3.)

Sphictyrtus intermedius, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 463. 2[1]; En. Hem. i. p. 203. 4[2].

Hab. Panama (*coll. Dist.*).—Colombia [1 2]; Guiana, Cayenne [1 2]; Trinidad (*coll. Dist.*).

The Panama specimen figured here is evidently but a variety of this species, having the scutellum wholly luteous, instead of having only the basal half either that colour or reddish, as described by Stål and well illustrated by specimens in my own collection. The bright blue of the pronotum is a common varietal character in all the green species of this genus.

3. **Sphictyrtus longirostris,** n. sp. (Tab. XV. fig. 2.)

Green; antenniferous tubercles, anterior third and basal fascia of head, a transverse linear callosity near anterior margin of pronotum, posterior margin of pronotum, and underside of body red; antennæ, anterior lateral margins, apex, and central portion of head, rostrum, and legs black; prosternum with the anterior margin, lateral and posterior margins (excluding lateral angles), and a narrow fascia near anterior coxæ, mesosternum with a central waved fascia and narrow posterior margin, metasternum with a central fascia, and apical margins of abdominal segments, dark bluish and, excepting lateral margin of prosternum, margined with luteous. Membrane black, opaque. Pronotum and corium thickly and finely punctate, scutellum transversely striate. Rostrum reaching apex of fourth abdominal segment.
Long. 24 millim.

Hab. GUATEMALA, Dueñas (*Champion*).

The large size of this species and the length of the rostrum will separate it from *S. fasciatus*, to which it has considerable resemblance in colour and markings.

PARYPHES.

Paryphes, Burmeister, Handb. ii. 1, p. 335 (1835); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 548.
Paryphes (part.), Dallas, List Hem. ii. p. 438 (1852).
Sundarus, Amyot & Serville, Hist. des Hém. p. 202 (1843).

This genus is at once separated from the preceding by the non-acute posterior angles of the metasternum. It is confined to the Neotropical Region, but is well represented in Central America.

1. **Paryphes flavo-cinctus.** (Tab. XV. fig. 4.)

Paryphes flavo-cinctus, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 461. 2[1]; En. Hem. i. p. 205. 3[2].

Hab. BRIT. HONDURAS, river Sarstoon (*Blancaneaux*); COSTA RICA[1] (*Van Patten*); PANAMA (*coll. Dist.*), Colon (*Boucard*).—COLOMBIA[2], Manaure (*Simons*), Bogota[2].

Stål describes the species as "supra niger viridi-æneo punctatus." The specimens now before me vary in that respect from dark green to dark blue. A specimen from Panama is here figured.

2. **Paryphes rufo-scutellatus.**

Nematopus rufo-scutellatus, Gray in Griffith, An. Kingd. xv. p. 241, t. 97. f. 1[1].
Paryphes rufo-scutellatus, Stål, En. Hem. i. p. 205. 4.

Hab. MEXICO[1].

3. **Paryphes imperialis.** (Tab. XV. fig. 5.)

Paryphes imperialis, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 461. 3[1]; En. Hem. i. p. 205. 9[2].

Hab. MEXICO [1 2]; GUATEMALA, San Juan (*Champion*).

A Guatemalan specimen is here figured.

Division **DISCOGASTRARIA.**

Discogastrida, Stål, Öfv. Vet.-Akad. Förh. 1867, p. 550.
Discogastrina, Stål, En. Hem. i. p. 206 (1870).
Discogastraria, Berg, Hem. Argent. p. 88 (1879).

The characters relied upon by Stål for the determination of this division are, "Spiraculis ab apice quam a basi segmentorum ventris saltem duplo longius remotis." Of six genera which are now included in the Discogastraria only one has been received from Central America.

SAVIUS.

Savius, Stål, Rio Hem. ii. p. 58 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 550.

This genus is easily recognized by a peculiar and distinct character from all its congeners "Disco ventris utrinque ruga longitudinali callosa terminato." Of three described species two are peculiar to Central America, the third has been received from Southern Brazil.

1. **Savius dilectus.** (Tab. XV. fig. 6.)

Scamurius dilectus, Stål, Stett. ent. Zeit. xxiii. p. 297. 157 *a*[1].
Savius dilectus, Stål, En. Hem. i. p. 208. 2[2].

Hab. MEXICO [1 2]; GUATEMALA, San Gerónimo, San Juan, San Isidro (*Champion*).

The type specimen is here figured, contained in the collection of Dr. Signoret.

2. **Savius jurgiosus.** (Tab. XV. fig. 7.)

Scamurius jurgiosus, Stål, Stett. ent. Zeit. xxiii. p. 296. 157[1].
Savius jurgiosus, Stål, En. Hem. i. p. 208. 3[2].

Hab. MEXICO [1 2] (*Höge*); GUATEMALA, San Gerónimo, El Reposo, Tocoy (*Champion*).

The specimen figured is from Guatemala.

The variable length of the apical joint of the antennæ, which is sometimes longer than the first, and at other times subequal in length to that joint (a peculiarity pointed out by Stål [2]), is very observable in the specimens which I have examined.

Subfam. *ALYDINÆ.*

Alydidæ, Dallas, List Hem. ii. p. 467 (1852).
Alydida, Stål, Öfv. Vet.-Ak. Förh. 1867, pp. 535 & 542.
Alydina, Stål, En. Hem. iii. pp. 34, 84 (1873).

This subfamily is but poorly represented in the Neotropical and Nearctic Regions compared with the total number of genera and species enumerated.

Division **ALYDARIA.**

Alydina, Stål, En. Hem. i. p. 209 (1870).
Alydaria, Stål, En. Hem. iii. pp. 85, 89 (1873).

The American Alydaria, as at present known, comprise about one fourth of the whole number of genera and probably about one half the number of species which are included in this subfamily. Of four genera three are Neotropical and one Nearctic; of the former, two are found in Central America.

These are the *Alydida propria* of Stål (Öfv. Vet.-Ak. Förh. 1867, p. 542), which he separates by the "Femoribus posticis subtus serie spinarum armatis."

HYALYMENUS.

Hyalymenus, Amyot & Serville, Hist. des Hém. p. 224 (1843); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 542; En. Hem. iii. p. 90 (1873).
Tivarbus, Stål, Öfv. Vet.-Akad. Förh. 1859, p. 458.

This genus is easily separated from the following and only other genus of the Alydaria here enumerated by the posterior tibiæ having the apices produced into distinct spines.

Hyalymenus is divided into two sections by the corium being either pellucid or subopaque; and it is only of this second division that we have as yet received examples from Central America. The majority of the species are Neotropical.

1. **Hyalymenus pulcher.** (Tab. XV. fig. 8.)

Hyalymenus pulcher, Stål, En. Hem. i. p. 211. 9[1].

Hab. HONDURAS[1].

A typical specimen in the Stockholm Museum is here figured. This species can always be distinguished from all the varieties of *H. tarsatus* by the marginal ventral spines.

2. **Hyalymenus tarsatus.**

Alydus tarsatus, Fab. Syst. Rhynch. p. 250. 9.
Alydus diversipes, Hope, Cat. Hem. ii. p. 19[1]; Dall. List Hem. ii. p. 477. 24[2].

Alydus affinis, Hope, Cat. Hem. ii. p. 19; Dall. List Hem. ii. p. 477. 22[3].
Alydus sinuatus, H.-S. Wanz. Ins. viii. p. 98, f. 865[4] (nec Fabr.).
Alydus recurvus, H.-S. Wanz. Ins. viii. p. 98, f. 866[5].
Alydus pallens, Dall. List Hem. ii. p. 476. 20[6].
Camptopus pectoralis, Stål, Rio Hem. i. p. 34. 1[7].
Hyalymenus tarsatus, Stål, En. Hem. i. p. 212. 11[8]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 294[9].
Stoll, Pun. f. 214.
Var. *a. pallescens*, Stål, En. Hem. i. p. 212.
Alydus atratus, Fabr. Syst. Rhynch. p. 251. 12.
Alydus obscurus, Hope, Cat. Hem. ii. p. 19.
Var. *b. infuscatus*, Stål, En. Hem. i. p. 212.
Hyalymenus (*Tivarbus*) *tarsatus*, Stål, Hem. Fabr. i. p. 62. 3.

Hab. North America, California[9].—Mexico[2 4 8 9] (*coll. Sallé*), Valladolid, Yucatan (*Gaumer*); Guatemala, San Gerónimo, Panima, San Juan, Cubilguitz (*Champion*); Honduras[8]; Panama (*coll. Dist.*).—West Indies[9], Jamaica[3]; Colombia[3 8], Bogota[8]; Guiana, Demerara[1] (*coll. Dist.*); Brazil[1 5 6 8], Para[8], Rio Janeiro[7 8].

This is a most variable species—as Stål remarks, "species quoad magnitudinem, colorem, picturam dorsi abdominis ventrisque, nec non formam pedum posticorum maxime varians." In the most melanic forms the antennæ are ochraceous, the apical joint being sometimes somewhat darker but always annulated with luteous near the base. In all the pale-coloured varieties the sternum is ornamented on each side near the coxæ with large luteous levigate spots—a character which, with the colour of the antennæ, has been used by Stål[8] as a sectional character for the genus; but in the melanic specimens these sternal spots are obsolete; and therefore little differential aid is thus afforded.

ALYDUS.

Alydus, Fabr. Syst. Rhynch. p. 248 (1803); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 542; Hem. Afr. ii. p. 7 (1865); En. Hem. i. p. 213 (1870); ib. iii. p. 89 (1873).
Burtinus, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 459.
Megalotomus, Fieb. Eur. Hem. pp. 58, 226 (1861).

The apices of the posterior tibiæ are unarmed, a character which, as previously remarked, distinguishes *Alydus* from *Hyalymenus*. Stål has divided *Alydus* into four subgenera, most of which have been adopted by Prof. Uhler as genera. Neither of these methods has been here followed. The genus as at present defined is well represented both in the Nearctic and Neotropical regions.

1. Alydus eurinus.

Lygæus eurinus, Say, Journ. Acad. Nat. Sci. Philad. iv. p. 324. 5[1]; Compl. Writ. ii. p. 247. 5.
Alydus eurinus, Stål, En. Hem. i. p. 213. 3[2] (exclud. *A. pilosulus*, H.-S.); Uhler, Hayden's Surv.

Mont. pt. iv. Zool. & Bot. p. 401; Bull. U.S. Geol. & Geogr. Surv. ii. p. 293; iii. p. 406. 1; Town. Glover, Ill. Ins. Ord. Hem. p. 21, t. vi. f. 21 [3].

Alydus ater, Dall. List Hem. ii. p. 478. 30 [4]; Stål, En. Hem. i. p. 213. 2 [5]; Town. Glov. Ill. Ins. Ord. Hem. p. 21, t. iv. f. 26.

Hab. NORTH AMERICA, [4 5], Canada [3], New York [2], Missouri [1], Texas [2], Colorado [3].—GUATEMALA, Quezaltenango, Guatemala city (*Champion*).

Examples of this species have been sent home by Mr. Champion from Guatemala. As Prof. Uhler remarks, it is the most closely related to *A. calcaratus*, Linn., of Europe; "but in all the specimens of the European insect which I have yet seen the collum of the prothorax is very short, and the disk of the pronotum more robust and flattened than in our species." I have, on the authority of the same writer, placed *A. ater*, Dall., as the female and therefore synonym of this species. Townend Glover, evidently deriving his information from the same source, states that *A. eurinus* "occurs in late summer and autumn, sometimes in great numbers, on golden-rod and other herbaceous plants growing rankly near the edges of woods, also on *Rhus glabra* (smooth sumach)."

2. **Alydus femoralis**, n. sp. (Tab. XV. fig. 9.)

Ochraceous, pilose, mottled and punctured with brown. Antennæ ochraceous; first, second, and third joints subequal; fourth longest, somewhat incrassated, black, with the base broadly luteous. Head with the lateral margins from eyes to insertion of antennæ, and a central longitudinal line, pale ochraceous; between eyes and surrounding ocelli transversely black. Pronotum with the lateral margins and a faint central longitudinal line pale ochraceous; lateral angles moderately produced, apices fuscous. Scutellum very coarsely punctate, with the apex paler. Corium with the lateral margin pale ochraceous; inner apical margin sanguineous. Abdomen above black; connexivum with a row of subquadrate luteous spots. Underside of the body very pale ochraceous; head beneath with the lateral margins, a central longitudinal line, and two linear and elongated marks on each side at base black. Sternum with the disk blackish; the lateral margins coarsely punctate, with a double series of obscure fuscous linear spots (in some specimens these are barely visible). Abdomen punctate, a double series of transverse black spots on disk of second segment, a single series of the same at base of third segment, and a prominent black spot on each side of disks of remaining segments. Legs pale ochraceous, spotted with fuscous; posterior femora with the apical halves fuscous, annulated with ochraceous; rostrum ochraceous, with the apex pitchy. Posterior femora armed with about four strong black spines.

Long. 11–12 millim.

Hab. GUATEMALA, Capetillo, San Joaquin (*Champion*).

This species appears to belong to the subgenus *Megalotomus*, Fieb., and to be allied to *A.* (*Megalotomus*) *pallescens*, Stål.

Division **MICRELYTRARIA.**

Micelytrida, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 543.
Micrelytrina, Stål, En. Hem. i. p. 215 (1870).
Micrelytraria, Stål, En. Hem. iii. p. 84 (1873).

This division, distinct from the Alydaria by the slender and unarmed femora, and

with the second joint of the rostrum usually distinctly longer than the two apical joints taken together, is at present represented by four genera in Central America. The Neotropical and Nearctic regions possess five genera of Micrelytraria, four of which are peculiar to the first. But three genera are recorded from the Ethiopian, Oriental, and Australian regions.

TRACHELIUM.

Trachelium, Herrich-Schäffer, Wanz. Ins. ix. p. 274 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 542; En. Hem. iii. p. 88 (1873).

In this genus the basal joint of the rostrum is shorter than the head, which, from the eyes, is elongated, straightened, and narrowed to the base. The lateral angles of the pronotum and the apex of the scutellum are strongly spinous. Only two Brazilian species have hitherto been recorded; a third, from Guatemala, is here described.

1. **Trachelium albo-apicatus**, n. sp. (Tab. XVI. fig. 2.)

Pale fuscous. Antennæ with the three basal joints subequal and concolorous; fourth longest, white, with the apical half black; apical margin of corium levigate and white, with the apical angle black. Underside of body concolorous; a white levigate spot near hind coxæ; disk of third and whole of fourth segments of abdomen luteous, with the apical margins black. Legs concolorous; apical joints of tarsi dark fuscous. Head distinctly punctate. Pronotum coarsely punctate and subgranulose, with a levigate callosity near anterior margin and a central raised longitudinal line; lateral spines long, slender, subacute, and suberect. Scutellum coarsely punctate, with the apex produced into a long, slender, erect spine, slightly inclined backwards. Clavus and costal margin of corium thickly and coarsely punctate, and a few scattered coarse punctures on disk of corium. Connexivum concolorous, with some marginal subquadrate fuscous spots. Long. 11–12 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

CYDAMUS.

Cydamus, Stål, Rio Hem. i. p. 33 (1860); Öfv. Vet.-Ak. Förh. 1867, p. 542; En. Hem. iii. p. 88 (1873).

Cydamus has the basal joint of the rostrum as long or longer than the head, and also differs from the preceding genus in not having the head elongated, straightened, and narrowed behind the eyes. The lateral angles of the pronotum are produced and spinous.

This is a purely Neotropical genus; and the following species here described is at present its most northern representative.

1. **Cydamus borealis**, n. sp. (Tab. XV. fig. 11.)

Pale ochraceous, punctured with fuscous. Antennæ concolorous; apex of the first and apical joint (excluding base) fuscous; basal joint slightly passing apex of head; second and third subequal, together about equalling the length of the fourth joint. Head and pronotum with two central longitudinal series of dark punctures situated a little apart. Pronotum with a few more scattered punctures on disk, and an obscure submarginal series of the same on each side; lateral-angular spines slender, pale, suberect,

acute, with the apices fuscous. Scutellum with the basal angles fuscous, a central longitudinal linear series of dark punctures, and with the apex produced into an obliquely erect, slender, acute, fuscous spine. Corium sparingly but somewhat coarsely punctate; membrane bronzy. Underside of body and head pale ochraceous, thickly covered with dark punctures; disk of sternum fuscous; abdomen with a central and two submarginal obscure and subobsolete pale lines. Rostrum reaching posterior coxæ, with the apex black. Legs pale ochraceous, spotted with fuscous.

Long. 8–9 millim.

Hab. GUATEMALA, San Gerónimo, Zapote, Senahu (*Champion*).

This species appears to be nearest allied to *C. picticeps*, Stål, from which it differs by the basal joint of the antennæ distinctly passing the apex of the head.

PROTENOR.

Protenor, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 543; En. Hem. iii. p. 88 (1873).

The unproduced and unarmed lateral angles of the pronotum separate this genus from *Cydamus*; the lateral lobes of the head are exserted and much longer than the central, the head being subequal to or a little longer than the pronotum.

One Nearctic species has been described; a second species is here added, from Central America.

1. **Protenor tropicalis**, n. sp. (Tab. XVI. fig. 3.)

Pale ochraceous. First, second, and third joints of antennæ subequal in length, with their apices somewhat fuscous; fourth longest, fuscous, with the base pale luteous. Head sparingly punctate and obscurely transversely striate; lateral margins and a central longitudinal impression pale luteous. Pronotum thickly punctate (excepting an almost levigate transverse space near anterior margin); lateral margins and a central longitudinal slightly raised line pale luteous. Scutellum sparingly punctate. Clavus somewhat thickly punctate. Corium with the punctures arranged in somewhat irregular longitudinal linear series. Membrane bronzy. Underside of body concolorous; lateral margins of head, sternum, and abdomen somewhat thickly punctate, the sternum most coarsely, and the abdomen most finely so. Legs pale ochraceous.

Long. 11–12 millim.

Hab. GUATEMALA, Las Mercedes (*Champion*).

DARMISTUS.

Darmistus, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 469; ib. 1867, p. 543; En. Hem. iii. p. 88 (1873).

Darmistus differs from *Protenor* by the lateral lobes of the head being very little longer than the central, and in having the basal joint of the antennæ shorter than the second joint. But one species is known at present.

1. **Darmistus subvittatus.** (Tab. XV. fig. 10.)

Darmistus subvittatus, Stål, Öfv. Vet.-Ak. Förh. 1859, p. 469. 1[1].

Hab. MEXICO [1].

The figure is from a typical specimen in the collection of the Stockholm Museum.

Division LEPTOCORISARIA.

Gerrida, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 543.
Gerrina, Stål, En. Hem. i. p. 217 (1870).
Leptocorisaria, Stål, En. Hem. iii. p. 85 (1873).

This small division, as represented in America, is almost confined to the Neotropical Region. Two genera are known, both of which are represented in Central America.

The second joint of the rostrum is not longer than the two apical joints taken together.

LYRNESSUS.

Lyrnessus, Stål, Rio Hem. ii. p. 59 (1862); Öfv. Vet.-Ak. Förh. 1867, p. 543; En. Hem. iii. p. 86 (1873).
Coristenia, Costa, Rendic. Accad. Napol. ii. p. 260 (1863).

But one species of this genus has been recorded; and I have had no opportunity as yet of examining it.

1. Lyrnessus geniculatus.

Leptocorisa geniculata, Guér. in Sagra's Hist. de Cuba, Ins. p. 392 [1].
Paryphes tibialis, Stål, Rio Hem. i. p. 31. 2 [2].
Coristenia flavicosta, Costa, Rendic. Accad. Napol. ii. p. 261.
Lyrnessus geniculatus, Stål, En. Hem. i. p. 217. 1 [3].

Hab. MEXICO, Oaxaca [3].—CUBA [1 3]; BRAZIL, Rio Janeiro [2 3].

LEPTOCORISA.

Gerris (p.), Fabr. Ent. Syst. iv. p. 187 (1794); Syst. Rhynch. p. 160 (1803).
Myodocha, Latr. Gen. Ins. iii. p. 126 (1807).
Leptocorisa, Latr. Règn. An. v. p. 197 (1829); Stål, En. Hem. iii. p. 86 (1873); Dall. List Hem. ii. p. 481 (1852).
Myodochus, Ol. Enc. Méth. viii. p. 105 (1811); Burm. Handb. ii. 1, p. 325 (1835).
Stenocoris, H.-S. Wanz. Ins. ix. pp. 244 & 275 (1851).
Rhabdocoris, Kol. Mel. ii. p. 67 (1845).
Gerris, Stål, Hem. Afr. ii. p. 87 (1865); Öfv. Vet.-Ak. Förh. 1867, p. 543.

The elongated head, with the lateral lobes much longer and meeting in front of the central lobe, will distinguish *Leptocorisa* from *Lyrnessus.* It is found both in the Nearctic and Neotropical regions, and is represented in all the great divisions of the world.

1. Leptocorisa filiformis.

Cimex filiformis, Fabr. Syst. Ent. p. 727. 157; Goeze, Ent. Beytr. ii. p. 251. 5; Fabr. Spec. Ins. ii. p. 375. 225; Mant. Ins. ii. p. 308. 293; Gmel. Syst. Nat. i. 4, p. 2191. 525.

Gerris filiformis, Fabr. Ent. Syst. iv. p. 191. 12; Syst. Rhynch. p. 260. 1; Stål, Hem. Fabr. i. p. 66. 1; En. Hem. i. p. 218. 1[1].

Leptocorisa linearis, Lap. Ess. Hém. p. 26[2].

Leptocorisa furcifera, Hope, Cat. Hem. ii. p. 18[3].

Leptocorisa tipuloides, Dall. List Hem. ii. p. 484. 5[4]; Guér. in Sagra's Hist. de Cuba, Ins. p. 391, excl. syn.[5]

Gerris (*Leptocorisa*) *filiformis*, Berg, Hem. Argent. p. 284. 367[6].

Hab. GUATEMALA, San Gerónimo (*Champion*).—CUBA[1 2 5]; BRAZIL[1 3 4], Rio Janeiro[1 4]; ARGENTINE REPUBLIC[5].

2. Leptocorisa tipuloides.

Cimex tipuloides, De Geer, Mém. iii. p. 354. 27, t. 35. f. 18; Goeze, Ent. Beytr. ii. p. 273. 11; Gmel. Syst. Nat. i. 4, p. 2194. 538.

Mydocha tipuloides, Latr. Gen. Ins. iii. p. 126.

Mydochus tipuloides, Ol. Enc. Méth. viii. p. 106. 2; Burm. Handb. ii. 1, p. 325. 2[1].

Leptocorisa tipuloides, A. & S. Hist. des Hém. p. 229. 1[2]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 294[3]; Town. Glover, Ill. Ins. Ord. Hem. p. 43, t. 3. f. 15.

Gerris tipuloides, Stål, En. Hem. i. p. 218. 2[4].

Hab. NORTH AMERICA, Philadephia[2], Texas[3 4].—MEXICO[3]; CENTRAL AMERICA[3].—COLOMBIA[4]; GUIANA, Surinam[1], Cayenne[2]; ECUADOR[4]; BRAZIL[4].

I include this species here on the authority of Prof. Uhler[3], not having received the species myself from Central America.

Subfam. *BERYTINÆ*.

Berytidæ, Fieber, Wien. ent. Mon. 1859; Eur. Hem. p. 209 (1861).

Berytida, Stål, Hem. Afr. ii. p. 119 (1864).

Berytina, Stål, En. Hem. iv. p. 127 (1874).

Berytinæ, Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 406 (1877).

I have followed Prof. Uhler in placing this subfamily in the Coreidæ and after the Alydinæ. Mr. Dallas also placed the genera which it comprises in about the same position. According to present knowledge we must consider the Palearctic Region the head quarters of the Berytinæ. Stål enumerates one African and three American genera. One of the last is represented in Central America; and I have been compelled to found a new one.

JALYSUS.

Jalysus, Stål, Rio Hem. ii. p. 59 (1862); En. Hem. iv. p. 128 (1874).

This genus is distinct from *Neides* and *Hoplinus*, the other American genera of the Berytinæ, by the impunctate corium; the apex of the clavus is produced and about reaches the membrane; the antennæ and legs are very long, the posterior femora usually passing the apex of the abdomen; the lateral angles of the pronotum are not prominent;

and the scutellum is armed with a small and suberect spine. Three Neotropical and one Nearctic species have been enumerated, a fifth is here described from Central America.

1. **Jalysus mollitus,** n. sp. (Tab. XVI. fig. 4.)

Head ochraceous; eyes fuscous. Antennæ ochraceous, obscurely speckled with fuscous; first joint much the longest, second a little shorter than third; fourth short, incrassated, fuscous, with the base and apex ochraceous; base of the second and base and apex of the third joint also much paler in colour. Pronotum coarsely granulate; anterior lobe ochraceous; posterior lobe fuscous, with a pale central longitudinal line. Corium and membrane ochraceous. Legs ochraceous, distinctly speckled with fuscous; femora with the incrassated apices paler at the extremities; apices of tibiæ and tarsi fuscous. Body beneath ochraceous; base of abdomen somewhat testaceous; central portion of underside of head, margins of prosternum, and disk of mesosternum fuscous; rostrum ochraceous, with the apex somewhat pitchy.

Long. $7\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

This is a very variable species,—the posterior lobe of the pronotum in some specimens being only variegated with fuscous; in others it is concolorous with the anterior lobe; the fuscous speckles on the second and third joints of the antennæ are frequently confluent or subconfluent, giving those joints the appearance of being fuscous in coloration; the scutellum, clavus, and membrane are also frequently suffused with fuscous. The granulated pronotum allies it with *J. tenellus*, Stål; but it is most closely allied to *J.* (*Metacanthus*) *pectoralis*, Dall. (the type and only example of which, in the British Museum, is from an unknown locality and mutilated as described), from which it appears principally to differ by the more robust thorax.

PARAJALYSUS, n. gen.

Allied to *Jalysus*, but differs in having the lateral angles of the pronotum strongly spinous. Base and anterior lobe of pronotum also sometimes spinous as in type described. Corium impunctate as in *Jalysus*, and apex of clavus reaching membrane as in that genus.

1. **Parajalysus spinosus,** n. sp. (Tab. XVI. fig. 5.)

Antennæ fuscous, first joint about equal in length to second and third, fourth joint subequal in length to second, incrassated, with the apex a little paler. Head pale ochraceous, with the eyes black. Pronotum with the anterior lobe pale ochraceous, and armed on the disk with a long erect black spine; posterior lobe golden yellow, coarsely punctate or subgranulose, with the lateral margins and a central levigate line pale luteous, lateral angles armed with a long black spine directed upwards and outwards, and a long erect spine of the same colour slightly directed backwards about centre of posterior margin. Scutellum blackish, with a small luteous tubercle at base. Corium ochraceous, basal costal margin luteous. Membrane pale ochraceous and subhyaline. Legs castaneous, with the incrassated apices of the femora somewhat paler; apices of the tibiæ and tarsi fuscous.

Long. 5 millim.

Hab. MEXICO (*Mus. Berol.*); GUATEMALA, Dueñas (*Champion*).

This species is only known to me by a single *carded* specimen from Guatemala (which is here figured but does not allow me to describe the underside of the body), and a Mexican specimen (without abdomen) in the Berlin Museum.

Subfam. *PSEUDOPHLŒINÆ.*

Pseudophlœina, Stål, En. Hem. i. p. 219 (1870); Öfv. Vet.-Ak. Förh. 1872, no. 6, p. 50.

The head quarters of this subfamily is the Palæarctic Region; and two of the three American genera which represent it are also found in that region.

DASYCORIS.

Dasycoris, Dall. List Hem. ii. pp. 487 & 519 (1852); Stål, Öfv. Vet.-Ak. Förh. 1872, no. 6, p. 53.
Coreus, Fieb. Eur. Hem. pp. 57 & 220 (1861).

Two American species of this Palæarctic genus have been enumerated. The antennæ are stout, rough, and hairy (the character relied on by Dallas); and Stål further differentiates "marginibus lateralibus anticis thoracis totis spinoso-pectinatis." The posterior coxæ are placed widely apart.

1. **Dasycoris nigricornis.** (Tab. XV. fig. 12.)

Dasycoris nigricornis, Stål, En. Hem. i. p. 219. 1[1].

Hab. Mexico, Oaxaca [1].

A typical specimen in the Stockholm Museum is here figured.

SCOLOPOCERUS.

Scolopocerus, Uhler, Wheeler's Rep. Geog. Expl. v. Zool. chap. xii. p. 832 (1875).

The author describes the genus as having the "general features of *Dasycoris*;" but he has not given differential characters. It appears to differ principally by the non-pectinated lateral margins of the pronotum and the non-pilose but granulated antennæ, which are also described as having "the basal joint longer than the second, the third longest, fourth very short, conical at tip, having only the base granulose." In the figure of the type, *S. secundarius* from Arizona (ibid. pl. xlii. fig. 5), these relative antennal lengths are quite differently portrayed, which is apparently the fault of the artist. In the Mexican species, which I have here included in the genus, the basal joint is incrassated and slightly shorter than the second, the remaining joints as described by Prof. Uhler. The rostrum is described as "extending nearly to the intermediate coxæ."

1. **Scolopocerus uhleri,** n. sp. (Tab. XVI. fig. 6.)

Above brownish testaceous. Antennæ pale granulate, speckled with fuscous; basal joint incrassated, slightly shorter than the second; third longest; fourth shortest, and thickened granulate at base only. Head sparingly subgranulate, with a central pale longitudinal line. Pronotum subgranulate, with a central longitudinal levigate line; the disk transversely luteous, anterior and posterior portions dark fuscous, the lateral margins slightly reflexed and sinuated, the lateral angles subprominent, slightly raised and rounded. Scutellum subgranulose, depressed at base and towards apex, with a central longitudinal line, apex, and

basal half of lateral margins luteous. Corium subgranulose, more or less speckled with fuscous. Membrane pale hyaline, but appearing concolorous when folded from reflexion of upper surface of abdomen; nervures brown and ramose. Connexivum pale ochraceous, each segment with a cluster of brownish punctures. Underside of body pale ochraceous; underside of head and sternum subgranulate, the basal portions of pro-, meso-, and metasternum fuscous. Rostrum reaching base of metasternum, pitchy towards tip, first joint a little shorter than head. Abdomen coarsely punctate. Legs pale ochraceous, spotted and annulated with pale fuscous.

Long. 8 millim.

Hab. MEXICO, Alvarez Mountains (*Dr. Palmer*).

A specimen from Mexico, in the Stockholm Museum, appears to be a variety of this species, in which the fuscous markings are almost absent, and the whole upper surface, including the pronotum, is dull ochraceous. The sternum beneath is without the fuscous shading; and a fuscous spot is thus very distinct on pro-, meso-, and metasternum; the abdomen beneath is also more mottled with pale fuscous.

Apparently allied to *S. secundarius*, Uhler, but differs by the rostrum reaching the base of metasternum, antennæ with the joints of unequal thickness, and the colour of scutellum &c.

CERALEPTUS.

Ceraleptus, Costa, Cim. regn. Napol. cent. 2, t. 11; Fieb. Eur. Hem. p. 219 (1861); Stål, Öfv. Vet.-Ak. Förh. 1872, no. 6, p. 53.

The posterior coxæ are contiguous or subcontiguous—a character which separates this genus from the preceding. But one American species is at present recorded:—

1. Ceraleptus americanus.

Ceraleptus americanus, Stål, En. Hem. i. p. 219. 1[1]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 299[2].

Hab. NORTH AMERICA, Texas [1 2], California [2], Arizona [2].—MEXICO [2].

This species is included here on the authority of Prof. Uhler, who gives Mexico as a habitat, and states that the species varies greatly in size and in the thickness of the antennæ, and somewhat in colour and distinctness of markings.

Subfam. *CORIZINÆ.*

Rhopalida, Stål, Hem. Afr. ii. pp. 1 & 111 (1865); Hem. Fabr. i. p. 67 (1868).
Rhopalina, Stål, En. Hem. i. p. 219 (1870).
Corizida, Mayr, Reise d. Nov. Hem. p. 121 (1866).
Corizina, Stål, Öfv. Vet.-Ak. Förh. 1872, no. 6, pp. 50 & 54; En. Hem. iii. pp. 34 & 97 (1873).

This subfamily, found in each of the great zoological regions, is well represented in Tropical America, apparently and according to present knowledge more numerously than in the eastern tropics, though the last are localities of which still comparatively little is known of the smaller Heteroptera.

Division **HARMOSTARIA.**

Harmostaria, Stål, En. Hem. iii. p. 97 (1873).

This division is well distinguished by the posterior femora being incrassated and spined beneath. It comprises a group of Neotropical and Nearctic insects, of which but two genera have been enumerated.

HARMOSTES.

Harmostes, Burm. Handb. ii. 1, p. 307 (1835); Dallas, List Hem. ii. p. 520 (1852); Stål, Stett. ent. Zeit. xxiii. p. 306 (1862); En. Hem. i. p. 219 (1870).

The distinguishing characters given for the division Harmostaria serve roughly to characterize this genus.

This genus is both Neotropical and Nearctic, a greater number of the species being found in the former region. It is largely represented in Central America.

A. *Abdomen not dilated.*

a. *Lateral margins of the pronotum crenulated.*

1. **Harmostes serratus.** (Tab. XV. fig. 13.)

Acanthia serrata, Fabr. Ent. Syst. iv. p. 75. 32.

Coreus gravidator, Fabr. Ent. Syst. iv. p. 133. 22; Syst. Rhynch. p. 199. 38.

Syrtis serrata, Fabr. Syst. Rhynch. p. 123. 6.

Harmostes perpunctatus, Dall. List Hem. ii. p. 521. 3; Stål, Stett. ent. Zeit. xxiii. p. 307. 184.

Harmostes serratus, Stål, Hem. Fabr. i. p. 67. 1[1]; En. Hem. i. p. 220. 1[2]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 300[3]; iii. p. 407[4]; Berg, Hem. Argent. p. 90. 113[5].

Hab. North America, California[3], Manitou[4], Arizona[3].—Mexico[3], Orizaba (*Bilimek, Mus. Vind. Cæs.*). — Antilles[1 2], St. Domingo (*Mus. Vind. Cæs.*), Cuba[3]; Argentine Republic[5].

The Argentine Republic, if Prof. Berg is correct in his identification, is the most southern habitat of the species, and would denote a very wide area of dispersal. Stål[1] copies, without comment, the habitat given by Fabricius of his *Syrtis serrata*, "India orientalis (Mus. Tottianum, Mus. Havn.)." The species appears to be somewhat variable in coloration, but is distinct from the following species by its size and by the length of the rostrum, which only reaches the base of the abdomen.

A specimen in the Vienna Museum is here figured, which I have compared with the typical *H. perpunctatus* of Dallas.

2. **Harmostes nebulosus.** (Tab. XV. fig. 14.)

Harmostes nebulosus, Stål, Stett. ent. Zeit. xxiii. p. 307. 185[1]; En. Hem. i. p. 220. 3[2].

Hab. Mexico[1 2], Orizaba, Tacubaya (*Bilimek, Mus. Vind. Cæs.*); Guatemala, San Gerónimo, Volcan de Atitlan, Cerro Zunil (*Champion*).

The type, in the collection of Dr. Signoret, is here figured.

3. **Harmostes formosus,** n. sp. (Tab. XV. fig. 15.)

Head ochraceous. Antennæ with the basal joint very incrassate, dark ochraceous, and about reaching apex of head; second and third joints subequal in length, testaceous; apex of second joint fuscous; fourth joint short, a little longer than first, thickened and fuscous. Pronotum ochraceous, finely punctate and obscurely wrinkled, subgranulose near anterior margin, with the lateral angles rounded and strongly reflexed; angular margins fuscous, lateral margins luteous and crenulated, anterior angles prominent; a central pale longitudinal line which is raised and levigate near anterior margin; posterior margin narrowly pale luteous. Scutellum ochraceous, with a central longitudinal line and apical margin pale luteous. Corium luteous, sparingly and finely punctate (clavus thickly so), with a large, elongated, fuscous spot on disk, a row of small fuscous spots on costal margin, and a larger spot of the same colour near apical angle. Membrane pale hyaline, with obscure fuscous spots. Underside of body pale luteous, lateral margin of head and sternum strongly punctate; abdomen with a few scattered black punctures on anterior margin of disk, and stigmata black; femora luteous, with their apices, tibiæ, tarsi, and rostrum testaceous. Rostrum just passing posterior coxæ, with the apex pitchy. Posterior femora with their apical halves strongly spined, four spines being longest, strongest, and luteous in colour.

Long. 9 millim., lat. pronot. ang. 3 millim.

Hab. Mexico, Cuernavaca (*Bilimek, Mus. Vind. Cæs.*).

The strongly produced and reflexed lateral angles of the pronotum, and distinct colour and markings, will distinguish this species from the others which form that section of the genus in which the pronotal margins are crenulated.

Note.—In the figure the basal joints of the antennæ are incorrectly delineated as not reaching the apex of the head.

b. *Lateral margins of the pronotum not crenulated.*

α. *Basal joint of the antennæ extending considerably beyond the apex of the head.*

4. **Harmostes subrufus,** n. sp. (Tab. XV. fig. 16.)

Head, pronotum, and scutellum luteous, sparingly but coarsely punctate. Antennæ ochraceous; basal joint incrassated and considerably passing apex of head; second joint a little shorter than third; fourth a little darker in colour, thickened, and about equal in length to first. Pronotum with the lateral angles rounded, subprominent, and slightly reflexed, a central longitudinal line and posterior margin narrowly pale luteous; two obscure fuscous fasciæ near lateral margins. Scutellum with the lateral and apical margins and a central longitudinal line pale luteous. Corium testaceous, nervures and costal margins luteous. Membrane pale hyaline. Underside of body and legs luteous; lateral margins of head and sternum strongly punctate.

Long. 8 millim.

Hab. Guatemala, Dueñas (*Champion*).

5. **Harmostes bicolor,** n. sp. (Tab. XV. fig. 17.)

Head testaceous, obscurely punctate. Antennæ with the basal joint considerably passing the apex of head, and much shorter than second joint (remainder mutilated). Pronotum testaceous, coarsely punctate; lateral margins, a central longitudinal line, and posterior margin (narrowly) pale luteous; lateral angles subprominent. Scutellum testaceous, with the lateral and apical margins pale luteous. Corium pale luteous; clavus, inner apical angles, and a series of small spots on costal margin testaceous. (In type specimen, described, the left corium has a large testaceous basal patch on lateral margin, which is followed by a subquadrate spot of the same colour.) Membrane pale hyaline. Underside of body pale greenish, with a few scattered black punctures; legs ochraceous.

Long. 7 millim.

Hab. Mexico, Chapultepec (*Bilimek, Mus. Vind. Cæs.*).

Besides its different colour and markings, the much less rounded and produced lateral angles of the pronotum will separate this species from *H. subrufus*.

β. Basal joint of the antennæ scarcely or slightly passing the apex of the head.

6. **Harmostes fraterculus.** (Tab. XV. fig. 18.)

Syromastes fraterculus, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 324. 2[1].

Harmostes fraterculus, Stål, En. Hem. i. p. 221. 10[2]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 300. 2[3]; Town. Glover, Ill. Ins. Ord. Hem. p. 40.

Hab. NORTH AMERICA, Indiana [1], Georgia [1 3], Maryland [3], Texas [2 3].—MEXICO, Orizaba, Cuernavaca (*Bilimek, Mus. Vind. Cæs.*); GUATEMALA, Dueñas, Cerro Zunil (*Champion*).

The Central-American specimens appear to agree well with Say's description.

B. *Abdomen dilated on each side.*

7. **Harmostes propinquus,** n. sp. (Tab. XV. fig. 19.)

Head and pronotum dull ochraceous, with some scattered and irregular fuscous shadings, obscurely punctate. Antennæ ochraceous, basal joint scarcely passing apex of head, second joint shorter than third, and about equal to fourth, which is fuscous, with the base ochraceous. Pronotum with the anterior lateral margins obscurely crenulated, the lateral angles subprominent and rounded, the anterior angles prominent and acute. Scutellum ochraceous, distinctly punctate. Corium dark greyish, with the nervures and costal margin ochraceous. Membrane pale hyaline. Connexivum dull ochraceous, with luteous spots. Underside of body and legs ochraceous; sternum and abdomen sometimes with some obscure fuscous longitudinal streaks. Underside of apices of posterior femora fuscous, and with a row of strong spines. Abdomen dilated and projecting beyond the corium on each side.

Long. 6 to 7 millim.

Hab. MEXICO, Tacubaya (*Bilimek, Mus. Vind. Cæs.*); GUATEMALA, Santa Rosa (*Champion*).

The dilated abdomen separates this very distinct species.

---

8. **Harmostes dorsalis.**

Harmostes dorsalis, Burm. Handb. ii. 1, p. 307[1]; Stål, En. Hem. i. p. 221. 11.

Hab. MEXICO [1].

I have with Stål been unable to identify this species; it probably represents one of the preceding Mexican species; but the description is too slight for any accurate decision.

AUFEIUS.

Aufeius, Stål, En. Hem. i. p. 221 (1870).

This genus at present contains but one species; and the characters relied upon by Stål for separating it from *Harmostes* are, "thorace disco impresso, carina media destituto, abdomine hemelytris latiore divergit."

1. **Aufeius impressicollis.** (Tab. XV. fig. 20.)

Aufeius impressicollis, Stål, En. Hem. i. p. 222. 1[1]; Uhler, Hayden's Surv. Mont. pt. iv., Zool. & Bot. p. 403[2]; Bull. U.S. Geol. & Geog. Surv. ii. p. 300[3]; iii. p. 407[4]; Wheeler's Rep. Geog. Expl. v. Zool. p. 834[5].

Hab. NORTH AMERICA, Texas[1 2 3], Dakota[2 3], Colorado[4], California[2 3], Gila river[5], Arizona[2 3].—MEXICO[1].

The specimen figured is a typical one, in the collection of the Stockholm Museum.

Division **CORIZARIA.**

Corizaria, Stål, En. Hem. iii. p. 97 (1873).

This division really comprises the old genus *Corizus*, several new genera having been founded by Stål on the Oriental and Ethiopian species of that genus. It differs from the Harmostaria by the unarmed posterior femora, and by the pronotal angles, which are obtuse or unarmed. The anterior portions of the lateral margins of the pronotum are either not or very obtusely sinuated. The basal joint of the antennæ is short, either not reaching or scarcely passing the apex of the head.

CORIZUS.

Corizus, Fallén, Spec. nov. Hem. disp. meth. exhib. p. 8 (1814) et Hem. Suec. p. 40 (1829); Signoret, Ann. Soc. Ent. Fr. sér. 3, vii. p. 75 (1859); Stål, Öfv. Vet.-Ak. Förh. 1872, No. 6, p. 55.

Rhopalus (part.), Schilling, Beitr. i. p. 36 (1829); Amyot & Serville, Hist. des Hém. p. 245 (1843); Dallas, List Hem. ii. p. 520 (1852).

Niesthrea, Spinola, Ess. Hém. p. 245 (1837).

Corizus being the only genus of the division as at present known in Central America, little diagnosis is required beyond what applies to the Corizaria. The genus as here treated is almost universally distributed. Its species appear to be of the most protean character.

1. **Corizus hyalinus.** (Tab. XVI. fig. 7.)

Lygæus hyalinus, Fabr. Ent. Syst. iv. p. 168. 115.

Coreus hyalinus, Fabr. Syst. Rhynch. p. 201. 45.

Rhopalus truncatus, Fieb. Eur. Hem. p. 234. 4.

Corizus hyalinus, Stål, Hem. Fabr. i. p. 68. 2; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 300. 1[1]; iii. p. 407[2].

Corizus (Liorhyssus) hyalinus, Stål, En. Hem. i. p. 222. 1.

Corizus dilatipennis, Sign. Ann. Soc. Ent. Fr. sér. 3, vii. p. 89. 18[3].

Corizus variegatus, Sign. Ann. Soc. Ent. Fr. sér. 3, vii. p. 89. 20[4].

Corizus truncatus, Stål, Hem. Afr. 2, p. 117. 3[5].

Liorhyssus hyalinus, Stål, En. Hem. iii. p. 98. 1[6].

Corizus viridicatus, Uhler, Hayden's Surv. Mont. pt. iv. Zool. & Bot. p. 404[7].

Corizus hyalinus, Stål, Öfv. Vet.-Ak. Förh. 1870, p. 659. 1[8].

Hab. North America, Nebraska [1 7], Dakota [1 7], Colorado [1 2], Texas [1].—Mexico [1], Guadalupe (*Bilimek, Mus. Vind. Cæs.*); Guatemala, Dueñas (*Champion*).—Cuba [1]; Europe; Africa, Nubia [3 5 6], Egypt [5], Cape of Good Hope [5 6]; Mauritius [4 5]; Australia [6]; Philippines [8].

Stål [8] appears to have had some doubt as to the identity of the Philippine specimens, as he writes "Specimina duo Philippina divergunt a speciminibus Europæis hemelytris brevioribus; an species distincta?"

Of American specimens Prof. Uhler remarks that "this species is quite variable in colors, and somewhat in proportions. Specimens from Cuba and San Domingo are suffused with red and more distinctly pubescent than the others from Texas and Dakota." He further remarks [2] that the "species is very widely distributed in Eastern Colorado; at least that is the case with the variety which I described under the name of *viridicatus*. It lodges in the flowers of various weeds, and seems to be common upon the plains, foot-hills, and parks in the mountains." "It lived singly in the crowns of small flowers in Manitou Park, and was common upon weeds in the Arkansas valley and near the mouth of the cañon of the Arkansas from August 4 to 19." Dr. Packard found it at Golden, July 3, and on Arapahoe Peak, 11,000 to 12,000 feet above sea-level, on July 1. The specimen figured is a dark form from Guatemala.

2. **Corizus punctatus.** (Tab. XVI. fig. 8.)

Corizus punctatus, Sign. Ann. Soc. Ent. Fr. sér. 3, vii. p. 81. 7 [1]; Stål, En. Hem. i. p. 225. 22.

Hab. Mexico [1], Orizaba (*Bilimek, Mus. Vind. Cæs.*); Guatemala, Zapote, Dueñas (*Champion*).

I have identified this species by the following characters as given by Dr. Signoret:—"Ecusson noirâtre avec les côtes jaunâtres, *l'extrémité faiblement arrondie.*" "Abdomen noir en dessus, tri-maculé de jaune en dessus." In the specimens which I have examined the lateral borders of the sternum are alone black.

3. **Corizus lateralis.** (Tab. XVI. figg. 9 & 10.)

Coreus lateralis, Say, Journ. Acad. Philad. iv. p. 320. 4; Compl. Writ. ii. p. 245. 4.

Corizus lateralis, Sign. Ann. Soc. Ent. Fr. sér. 3, vii. p. 97. 36; Uhler, Hayden's Surv. Mont. pt. iv. Zool. & Bot. p. 404 [1]; Bull. U.S. Geol. & Geog. Surv. ii. p. 301. 4 [2]; iii. p. 408 [3]; Proc. Bost. Soc. Nat. Hist. xix. p. 386 [4].

Hab. North America, Colorado [1 2 3], Texas [1 2], Florida [1].—Mexico (*Bilimek, Mus. Vind. Cæs.*); Guatemala, San Gerónimo, Dueñas (*Champion*).

Prof. Uhler [4], correctly remarks Dr. Signoret, "describes a *Corizus* which he refers to *C. lateralis*, Say; but some of the characters there employed do not agree with those given by Mr. Say." If, however, a varietal view of the species be taken, I think these discrepancies vanish. In the Guatemalan specimens figured, the corium agrees with

Dr. Signoret's description, "Elytres transparentes, l'extrême sommet de la corie rougeâtre," a character not mentioned by Mr. Say, who, however, describes the scutellum "with a longitudinal impunctured whitish line," which this same specimen exhibits, though not referred to in the description of Dr. Signoret. In the specimens figured the connexivum is spotted with black, as described by the last-mentioned author. From these considerations I have felt bound to include these forms under Say's name; the figures given, however, are calculated, I hope, to prevent any misunderstanding.

4. **Corizus pictipes.** (Tab. XV. fig. 24 & *C. luteolus*, fig. 25.)

Rhopalus pictipes, Stål, Freg. Eug. Resa, Ins. p. 239. 48[1].
Corizus mexicanus, Sign. Ann. Soc. Ent. Fr. sér. 3, vii. p. 95. 33[2].
Corizus proximus, Sign. Ann. Soc. Ent. Fr. sér. 3, vii. p. 96. 34[3].
Corizus nebulosus, Sign. Ann. Soc. Ent. Fr. sér. 3, vii. p. 98. 39[4].
Corizus pictipes, Stål, Stett. ent. Zeit. xxiii. p. 307. 188[5].
Corizus (*Niesthrea*) *pictipes*, Stål, En. Hem. i. p. 223. 5[6]; Berg, Hem. Argent. p. 93. 117[7].
Corizus anticus, Berg, Hem. Argent. p. 94. 118[8]; ib. p. 284. 117.

Hab. Mexico[2 5 6] (*coll. Sign.*), Orizaba (*Bilimek*, *Mus. Vind. Cæs.*); Guatemala, San Gerónimo, Pantaleon, Dueñas, Cerro Zunil, Guatemala city (*Champion*).—Brazil[6], Bahia[3], Rio Janeiro[1 4 6]; Argentine Republic[7 8], Buenos Ayres[1 6].

Stål[1] gives also as a habitat "Insula Taiti;" but as he does not reproduce the name of this locality in his 'Enumeratio Hemipterorum'[6], it possibly was originally given by mistake. This is an extremely variable species, in size, colour, and markings, as remarked by Stål[5], and abundantly testified in the Central-American specimens now before me. According to Berg it is abundant in all parts of the Argentine Republic. The figure 24 is taken from a large and bright-coloured Guatemalan specimen; from the same locality, however, have been received smaller, darker, and much more obscurely-coloured examples. Fig. 25 (*C. luteolus*) represents the variety described by Dr. Signoret as *C. mexicanus*, which was obtained in Guatemala by Mr. Champion, and which I have followed Stål in regarding as but a varietal form.

5. **Corizus ventralis.** (Tab. XV. fig. 23.)

Corizus ventralis, Sign. Ann. Soc. Ent. Fr. sér. 3, vii. p. 92. 27[1].
Corizus (*Niesthrea*) *ventralis*, Stål, En. Hem. i. p. 223. 6.

Hab. Mexico[1] (*coll. Sign.*, *Mus. Holm.*), Orizaba (*Bilimek*, *Mus. Vind. Cæs.*); Guatemala, San Gerónimo (*Champion*).

A Guatemalan specimen is figured. The species appears to be very closely allied to the preceding, judging from forms received from Guatemala.

Division **SERINETHARIA.**

Serinetharia, Stål, En. Hem. iii. p. 97 (1873).

In this division the anterior portion of the lateral margins of the pronotum are distinctly and angularly emarginated, a character which will alone separate the Serinetharia from the Corizaria. Three genera are included, two of which are here enumerated; the third, *Serinetha*, is found in the Ethiopian, Oriental, and Australian Regions.

LEPTOCORIS.

Leptocoris, Hahn, Wanz. Ins. i. p. 200 (1831).
Pyrrhotes, Westwood in Hope, Cat. Hem. ii. p. 6 (1842), ad partem.
Serinetha (part.), Spinola, Ess. Hém. p. 247 (1837); Dallas (part.), List Hem. ii. p. 459 (1852).

A reference to the diagnostic characters of the following genus will serve to separate *Leptocoris.*

But one species is known from Central America, and is recorded from Mexico.

1. **Leptocoris trivittatus.**

Lygæus trivittatus, Say, Journ. Acad. Philad. iv. p. 322. 2[1]; Compl. Writ. ii. p. 246. 2.
Leptocoris trivittatus, Stål, En. Hem. i. p. 226. 1[2]; Uhler, Hayden's Surv. Mont. pt. iv. Zool. & Bot. p. 404[3]; Bull. U.S. Geol. & Geogr. Surv. ii. p. 301[4]; ib. iii. p. 408; Town. Glover, Ill. Ins. Ord. Hem. p. 43, t. iv. f. 24.

Hab. North America, Missouri[1 4], Kansas[4], California[3 4] (*coll. Dist.*), Colorado[3 4], Arizona[3 4].—Mexico[2 4].

Of this species Prof. Uhler remarks that, although very common in Arizona and California, he did not find many specimens in Colorado. In the month of August he met with it at the roots of cacti and yuccas.

JADERA.

Pyrrhotes (part.), Westw. in Hope, Cat. Hem. ii. p. 6 (1842).
Therapha (part.), Amyot & Serville, Hist. des Hém. p. 244 (1843).
Serinetha (part.), Dallas, List Hem. ii. p. 459 (1852).
Jadera, Stål, Rio Jan. Hem. ii. p. 59 (1862); Stett. ent. Zeit. xxiii. p. 306 (1862); En. Hem. iii. p. 99 (1873)[1].

Stål[1] thus abstracts his diagnosis of this genus:—"Bucculis basin capitis attingentibus; segmento ventrali sexto feminarum mihi cognitarum apice truncato." Of seven recorded species three are found in Central America.

1. **Jadera obscura.** (*J. lateralis,* Tab. XV. fig. 21.)

Pyrrhotes obscura, Hope, Cat. Hem. ii. p. 26[1].
Serinetha discolor, Stål, Rio Jan. Hem. i. p. 32. 2[2].
Jadera obscura, Stål, En. Hem. i. p. 226. 1[3]; Berg, Hem. Argent. p. 95. 120[4].
Jadera lateralis, Stål, Stett. ent. Zeit. xxiii. p. 307. 187[5]; En. Hem. i. p. 226. 2[6].

Hab. MEXICO [5 6]; GUATEMALA, Teleman, Purula (*Champion*).—BRAZIL, Rio Janeiro [1 2 3]; ARGENTINE REPUBLIC [4].

I quite agree with Prof. Berg [4] in considering *J. lateralis*, Stål, as a synonym of *J. obscura*, Hope.

2. **Jadera hæmatoloma.** (Tab. XVII. fig. 5.)

Leptocoris hæmatoloma, H.-S. Wanz. Ins. viii. p. 103, fig. 873 [1].
Serinetha hæmatoloma, Dall. List Hem. ii. p. 463. 17 [2].
Lygæus (*Serinetha*) *hæmatolomus*, Guér. in Sagra, Hist. de Cuba, Ins. p. 393 [3].
Jadera hæmatoloma, Stål, En. Hem. i. p. 226. 3 [4]; Uhler, Hayden's Surv. Mont. pt. iv. Zool. & Bot. p. 404 [5]; Bull. U.S. Geol. & Geog. Surv. ii. p. 302 [6]; Town. Glover, Ill. Ins. Ord. Hem. p. 43, t. ix. f. 5.
Lygæus marginalis, Walk. Cat. Het. v. p. 45. 45 [7].

Hab. NORTH AMERICA, Texas [4 5 6], Kansas [5], Colorado [6], California [5 6], Arizona [5 6].—MEXICO [1 4 6], Oaxaca [7]; GUATEMALA, San Gerónimo, Dueñas (*Champion*).—CUBA [3 4 6]; COLOMBIA [2].

Prof. Uhler [6] observes that "there is a form of this with rudimentary wing-covers—which is moderately common in Texas, Arizona, and Cuba." Such a form appears to have been figured by Townend Glover.

3. **Jadera æola.** (Tab. XV. fig. 22.)

Serinetha æola, Dall. List Hem. ii. p. 463. 16 [1].
Jadera æola, Stål, En. Hem. i. p. 227. 7 [2].

Hab. NORTH AMERICA, Texas [2].—MEXICO [1] (*Bilimek, Mus. Vind. Cæs.*), Jalapa (*Höge*); GUATEMALA, San Gerónimo, Zapote, Cerro Zunil (*Champion*).

A Guatemalan specimen is figured.

Fam. LYGÆIDÆ.

Lygæidæ, Dallas, List Hem. ii. p. 531 (1852); Stål, En. Hem. iv. p. 98 (1874).
Lygæida, Stål, Hem. Afr. ii. p. 120 (1865).

Subfam. *LYGÆINÆ.*

Lygæida, Stål, Hem. Afr. ii. p. 121 (1865).
Lygæina, Stål, En. Hem. iv. p. 98 (1874).

This subfamily has been divided into two well-marked and apparently natural divisions.

Division **LYGÆARIA.**

Lygæaria, Stål, En. Hem. iv. p. 98 (1874).

Stål has thus diagnosed this division:—"Alis totis vel magnam ad partem fuscis vel infuscatis; margine apicali corii recto; angulo apicali exteriore tuberculorum antenni-

ferorum obtuso vel obtusiusculo; segmento dorsali ultimo marium apice plerumque truncato; segmento genitali marium rarissime foveato."

About sixteen extra-European genera are comprised in this division, four of which are found in Central America.

ONCOPELTUS.

Oncopeltus, Stål, Hem. Fabr. i. p. 75 (1868); En. Hem. iv. pp. 98 & 101 (1874).

This genus is at once recognized by the tumid scutellum with a central longitudinal carination. The only other allied genus showing this peculiarity, but with a central longitudinal sulcation, is from Tropical Africa.

The majority of the species are Neotropical, seven of which have been received from Central America; the genus is also represented in all the other great zoological regions. Stål divided the genus into two subgenera *Oncopeltus* and *Erythrischius*, which are denoted but not followed here.

1. **Oncopeltus gutta.** (Tab. XVI. fig. 22.)

Lygæus gutta, H.-S. Wanz. Ins. vii. p. 20, f. 703 [1]; ib. ix. p. 200.
O. (*Oncopeltus*) *gutta*, Stål, En. Hem. iv. p. 101. 4 [2].
Oncopeltus guttas, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 302. 1 [3].

Hab. North America, California [3], Arizona [3].—Mexico [1 2 3] (*coll. Dist.*), Cuernavaca (*Bilimek, Mus. Vind. Cæs.*), Oaxaca (*Mus. Berol.*).

This species is very protean in markings. Stål [2] enumerates three varieties; but there are other and intermediate ones. The head is either totally black or spotted with red; the pronotum has generally a central longitudinal black line, but is sometimes without it; and the scutellum is either luteous, red, or black. A Mexican variety is figured.

Stål has remarked that the second and third joints of the rostrum are of variable length.

2. **Oncopeltus sexmaculatus.** (Tab. XVII. fig. 1.)

O. (*Oncopeltus*) *sexmaculatus*, Stål, En. Hem. iv. p. 102. 5 [1].
Lygæus gutta, Town. Glov. Ill. Ins. Ord. Hem. p. 45, t. vii. f. 15.

Hab. Mexico [1]; British Honduras, river Sarstoon (*Blancaneaux*); Guatemala, Capetillo, Teleman (*Champion*).

The specimen figured is from Guatemala. The form delineated by Townend Glover evidently applies to this species.

3. **Oncopeltus varicolor.** (Tab. XVI. fig. 21.)

Lygæus varicolor, Fabr. Ent. Syst. iv. p. 149. 49; Syst. Rhynch. p. 219. 65; Dall. List Hem. ii. p. 538. 16 [1]; Mayr, Nov. Hem. p. 126 [2].
Lygæus alternans, H.-S. Wanz. Ins. vii. p. 20, f. 704 [3]; Dall. List Hem. ii. p. 539. 18 [4].

Lygæus (*Oncopeltus*) *varicolor*, Stål, Hem. Fabr. i. p. 70. 1.
O. (*Oncopeltus*) *varicolor*, Stål, En. Hem. iv. p. 102. 6[5]; Berg, Hem. Argent. p. 98. 122[6].
Oncopeltus varicolor, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 303. 2[7].

Hab. North America, California[7].—Central America[7]; Mexico[1 3 4 5 7] (*Mus. Berol.*, *coll. Sallé*), Orizaba (*Bilimek*, *Mus. Vind. Cæs.*), Jalapa (*Höge*); Guatemala, San Gerónimo, Capetillo, El Tumbador (*Champion*); Nicaragua, Chontales (*coll. Dist.*); Costa Rica, Irazu (*Rogers*); Panama, Volcan de Chiriqui (*Champion*).—San Domingo[6]; Colombia[1], Bogota[5]; Venezuela[1] (*Mus. Vind. Cæs.*); Trinidad (*coll. Dist.*); Brazil[1 5 7], Sao Paulo[5], Rio Janeiro[2 5]; Argentine Republic[6], Buenos Ayres (*coll. Dist.*).

As with others of the genus, this species is also of a variable character, the principal forms of which are as follows:—

Var. *a*.

The pronotum is black, with two red (sometimes luteous) spots, which extend from the anterior margin to a little beyond the middle; the corium and membrane are black, the first with large yellow spots at base and apex; body beneath with a lateral series of sanguineous spots.

This variety has been identified by Stål as the true *L. varicolor*, Fabr., and is the form represented here by the fig. 21. It appears to be very scarce in Mexico. Stål[5] gives no record of it from that country; and I have seen but one specimen from there, which is contained in the Berlin Museum. It is very abundant in Costa Rica, and is somewhat common in Guatemala; thence it extends to the most southern habitat of the species.

Var. **alternans**, H.-Sch.

This variety differs from the preceding in having the pronotal spots larger and concolorous with those of the corium, the lateral spots to the abdomen are larger, and the anterior ones generally confluent.

This form appears to be almost confined to Mexico.

Var. **stålii**, Dist. (Tab. XVI. fig. 20.)

Disk and anterior portion of the head, pronotum, scutellum, corium, sternum, and abdomen red. Lateral margins of the pronotum, a central longitudinal line to pronotum and scutellum, base of scutellum, a spot on disk of corium, wide and irregular transverse fasciæ to sternum situated near coxæ, posterior half of disk, apex, and lateral margins of abdomen black.

This is the var. *c* of Stål[5], but is so distinct in markings that I have considered it best to give a separate varietal name. It appears to be quite confined to Mexico, where the specimen figured was obtained by Herr Höge.

4. **Oncopeltus cingulifer.** (Tab. XVI. figs. 24, 25.)

Oncopeltus (*Erythrischius*) *cingulifer*, Stål, En. Hem. iv. p. 103. 11[1].

Hab. Mexico[1] (*Mus. Berol.*), Puebla (*Mus. Vind. Cæs.*); Guatemala, Teleman (*Cham-*

pion); Honduras [1]; Costa Rica (*van Patten*); Panama, Volcan de Chiriqui (*Champion*). —Colombia [1], Rio Magdalena, Cauca (*Dr. O. Thiere*); Venezuela, Caracas.

Stål describes two varieties of this species, which are sufficiently shown by the figures of the two specimens here given, which are both from Costa Rica. Attached to a typical specimen kindly forwarded to me for examination from Stockholm by Dr. Aurivillius, is a label bearing a MS. name which is somewhat illegible, but appears to be "*almorsonii*, Stål."

5. **Oncopeltus unifasciatus.**

Lygæus unifasciatus, Hahn, Wanz. Ins. ii. p. 7, f. 120 [1]; H.-S. Wanz. Ins. ix. p. 200; Dall. List Hem. ii. p. 539. 22 [2]; Mayr, Nov. Hem. p. 123.

Oncopeltus (*Erythrischius*) *unifasciatus*, Stål, En. Hem. iv. p. 103. 12 [3]; Berg, Hem. Argent. p. 99. 123 [4].

Hab. Mexico [2].—Jamaica [2]; Venezuela [2]; British Guiana [2]; Brazil [1 2 3], Rio Janeiro [2 3]; Argentine Republic [4].

We have not received this species from Central America ourselves; and I have inserted it here on the authority of Mr. Dallas [2], who has recorded a Mexican specimen in the British Museum.

6. **Oncopeltus sandarachatus.**

Lygæus sandarachatus, Say, New Harm. Dec. 1831; Compl. Writ. i. p. 328. 1; Town. Glov. Ill. Ins. Ord. Hem. p. 45 [2].

Lygæus unifasciatus, var.?, H.-S. Wanz. Ins. viii. p. 105, f. 876 [1].

Oncopeltus (*Erythrischius*) *sandarachatus*, Stål, En. Hem. iv. p. 103. 13 [3].

Erythrischius sandarachatus, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 303. 1 [4].

Hab. North America, California [4].—Mexico [2 3 4] (*coll. Sallé*), Valladolid in Yucatan (*Gaumer*); Guatemala, Teleman (*Champion*); Panama, Volcan de Chiriqui (*Champion*). —Antilles (*coll. Dist.*).

7. **Oncopeltus fasciatus.** (Tab. XVI. fig. 23.)

Lygæus aulicus, H.-S. Wanz. Ins. vi. p. 76, f. 646 [1]; ib. ix. p. 196 (nec Fabr.).

Lygæus fasciatus, Dall. List Hem. ii. p. 538. 17 [2]; Stål, Stett. ent. Zeit. xxiii. p. 308. 193 [3]; Uhler, Hayden's Surv. Mont. pt. iv. Zool. & Bot. p. 405 [4]; Town. Glov. Ill. Ins. Ord. Hem. p. 45, t. 1. f. 11, & t. 7. f. 19 [5].

Oncopeltus (*Erythrischius*) *fasciatus*, Stål, En. Hem. iv. p. 103. 14 [6].

Erythrischius fasciatus, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 303. 2 [8]; Proc. Bost. Soc. Nat. Hist. xix. p. 386 [7].

Hab. North America [1 7], United States [2], Maryland [5 8], Florida [2], Texas [6 8] (*Mus. Vind. Cæs.*), Arizona [4 8].—Mexico [2 3 6 8] (*Sichel, Mus. Vind. Cæs.*; *coll. Sallé*), Oaxaca (*coll. Dist.*), Jalapa (*Höge*), Hacienda de Bleados, San Luis Potosi (*Dr. Palmer*); British

Honduras, Rio Hondo (*Blancaneaux*); Guatemala, Dueñas (*Champion*); Costa Rica (*van Patten & Mus. Berol.*).—Cuba [6]; San Domingo (*coll. Dist.*); Colombia [2 6]; Guiana, Demerara [2], Surinam [6]; Brazil [2].

A pale-coloured specimen from Mexico is here figured.

This species is distributed over a wide area. Prof. Uhler [4] states that it is common over the greater part of the United States east of the Sierra Nevada, and extends from Canada to Central America and Brazil. The same author [8] also states that in Maryland it is common on the purple *Asclepias*; and Townend Glover [5] writes that at the Maryland Agricultural College Mr. Peck not only found it in great abundance on flowers of *Asclepias*, but also in company with caterpillars of a lepidopteron (*Euchetes*, Egle). *O. fasciatus* is closely allied to the preceding species; but, apart from its generally larger size, it may be distinguished by the much longer rostrum.

LYGÆUS.

Lygæus (part.), Fabr. Ent. Syst. iv. p. 133 (1794); Syst. Rhynch. p. 203 (1803); Mayr, Nov. Hem. p. 123 (1866).
Lygæus, Stål, Öfv. Vet.-Ak. Förh. 29. 7, p. 41 (1872); En. Hem. iv. pp. 99 & 104 (1874)
Lygæus, subg. *Melanocoryphus*, Stål, Öfv. Vet.-Ak. Förh. 29. 7, p. 41 (1872).
Melanocoryphus, Stål, En. Hem. iv. p. 99 (1874).
Lygæus (part.), Fieb. Eur. Hem. pp. 44 & 164 (1861).
Lygæosoma, Fieb. Eur. Hem. pp. 45 & 167 (1861).

In this genus the scutellum is not tumid; the fourth joint of the rostrum is not longer than the third, and the following characters, as pointed out by Stål, are constant and important:—"Capite pone oculos, qui angulos anticos pronoti tangunt, haud tumescente." The characters "Metapleuris postice recte truncatis, marginibus antico et postico parallelis vel subparallelis, margine postico haud vel vix obliquo," apply also to the following genus.

Stål has divided the extra-European species of the genus into eleven subgenera, four of which are represented in Central America, and are here denoted and used in a sectional manner, whilst a fifth section is devoted to what Stål ultimately considered a true generic division.

Even these divisions or sections, according to my experience, are sometimes not only unsatisfactory, but even arbitrary, resting, as they necessarily do, almost on colour-differences alone.

Lygæus is found in all the zoological divisions of the world.

vs. p. 181 —— *Sternum wholly or in great part black. Margins of abdomen spotted with black. Pronotum black, with a pale central fascia or spots.* Graptolomus, Stål.

vs. p. 180 The species included in this division appear to be confined to the Nearctic and Neotropical Regions.

1. Lygæus costalis.

Lygæus costalis, H.-S. Wanz. Ins. vii. p. 22, f. 706[1]; ix. p. 195; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 302[2].

L. (*Graptolomus*) *costalis*, Stål, En. Hem. iv. p. 107. 17[3].

Hab. NORTH AMERICA, Texas [2], California [2], Arizona [2].—MEXICO [1 2 3] (*Mus. Berol.*), Chapultepec (*Bilimek*, *Mus. Vind. Cæs.*), Jalapa (*Höge*), Oaxaca (*coll. Dist.*), Alvarez Mountains (*Dr. Palmer*); GUATEMALA, Capetillo, Dueñas, Purula, Quiche Mountains (*Champion*).

Prof. Uhler [2] remarks, and apparently with excellent reason, "sufficient acquaintance with the nature of this form may establish it to be the form of *L. turcicus* dependent upon the tablelands of South-western North America." It varies in sometimes having the membrane spotted with white. *L. turcicus*, Fabr., is a species at present restricted to North America, contingent on *L. costalis*, *L. reclivatus*, and *L. kalmii* not being shown to be but southern varieties of it.

2. Lygæus reclivatus.

Lygæus reclivatus, Say, Journ. Ac. Phil. iv. p. 321. 1; Compl. Writ. ii. p. 245. 1; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 302. 2[1]; iii. p. 408; Proc. Bost. Soc. Nat. Hist. xix. p. 386. 2[2]; Town. Glover, Ill. Ins. Ord. Hem. p. 45, t. 6. f. 26.

Lygæus reclivatus, var. *enotus*, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 329. 4.

L. (*Graptolomus*) *reclivatus*, Stål, En. Hem. iv. p. 107. 18[3].

Hab. NORTH AMERICA [1 2], Texas [1], Colorado [1], Missouri [3], California [1], Arizona [1], New Mexico [1].—MEXICO [3], Cordova (*coll. Dist.*); COSTA RICA (*van Patten*, *Mus. Berol.*).

That this is but a form of *L. turcicus* appears to me extremely probable; and I follow Stål and Uhler in considering it distinct with much doubt and hesitation.

Prof. Uhler, in Hayden's 'Survey of Montana,' writes:—"The form described as *L. reclivatus*, Say, differs from the Fabrician only in having two white dots on the membrane. As specimens with this peculiarity occasionally hatch out of a cluster of eggs of the *L. turcicus* laid on the pink *Asclepias* in Maryland, I do not hesitate to place it as a synonym of that species." This appears conclusive; but it was written in 1872, and the same author [2 3] subsequently treats the two forms as distinct species, remarking, however [2], "This form is placed apart provisionally from *L. turcicus*, Fabr., merely because the full history of the species has not yet been elaborated."

3. Lygæus kalmii. (Tab. XVII. fig. 2.)

L. (*Graptolomus*) *kalmii*, Stål, En. Hem. iv. p. 107. 19[1].

Lygæus kalmii, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 302. 4[2].

Hab. North America [1] [2], Illinois (*coll. Dist.*), Texas (*Mus. Vind. Cæs.*), California [1] [2]. —Mexico [1] [2], San Luis Potosi (*Dr. Palmer*).

A Mexican specimen is here figured. The species varies in having either a sinuated red fascia, or three red spots near the middle of the pronotum, and also in having the membrane either unicolorous or spotted with white. I agree with Prof. Uhler in considering this but another form of *L. turcicus*; but as he places it as distinct, I again follow him and Stål. The totally black clavus is one of the best distinctive characters.

4. **Lygæus ruficeps.** (Tab. XVII. fig. 3.)

Lygæus ruficeps, Stål, Stett. ent. Zeit. xxiii. p. 309. 198 [1].
L. (*Graptolomus*) *ruficeps*, Stål, En. Hem. iv. p. 107. 20.

Hab. Mexico [1] (*Sichel, Mus. Vind. Cæs.*); Panama, Matachin (*Dr. Thieme, coll. Oberthür*).

The type in the collection of Dr. Signoret is here figured *.

5. **Lygæus trux.** (Tab. XVI. fig. 19.)

Lygæus trux, Stål, Stett. ent. Zeit. xxiii. p. 308. 197 [1].
L. (*Graptolomus*) *trux*, Stål, En. Hem. iv. p. 107. 21.

Hab. Mexico [1], Tacubaya (*Bilimek, Mus. Vind. Cæs.*).

6. **Lygæus truculentus.** (Tab. XVII. fig. 4.)

Lygæus truculentus, Stål, Stett. ent. Zeit. xxiii. p. 308. 196 [1]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 302 [2].
L. (*Graptolomus*) *truculentus*, Stål, En. Hem. iv. p. 108. 23 [3].

Hab. North America, California [2] [3].—Mexico [1] [2] (*Bilimek, Mus. Vind. Cæs.*).

The type in the collection of Dr. Signoret is here figured.

*** Lygæus analis.**

Lygæus analis, Dall. List Hem. ii. p. 540. 25 [1]; Walker, Cat. Het. v. p. 42. 22 [2].
L. (*Graptolomus*) *analis*, Stål, En. Hem. iv. p. 108. 26.

Hab. North America [2] ? ?.—Mexico [1].

The type of this insect is no longer contained in the British Museum. Mr. Dallas gave the habitat Mexico for his type; and Walker has placed a North-American specimen (not *L. analis*) in its place, which he erroneously recorded as above [2]. Mr. Butler informs me that many types were thus lost or misplaced by Walker. It would from the description appear to be very closely allied to *L. ruficeps*, Stål.

7. Lygæus formosus.

Lygæus formosus, Blanch. Hist. Ins. iii. p. 130. 6[1]; D'Orb. Dict. Un., Atl. Zool. ii. Hém. t. 4. f. 1.
Lygæus elatus, Stål, Stett. ent. Zeit. xxiii. p. 308. 194[2].
L. (*Graptolomus*) *formosus*, Stål, En. Hem. iv. p. 108. 24[3].

Hab. Mexico [2 3], Vera Cruz [1], Tacubaya (*Bilimek*, *Mus. Vind. Cæs.*); Costa Rica, Cache (*Rogers*).—Venezuela, Caracas (*Dr. Thieme*).

Pronotum black, without pale central fascia or spots. Melanopleurus, Stål.

8. Lygæus bicolor. (Tab. XVI. fig. 17.)

Lygæus bicolor, H.-S. Wanz. Ins. ix. p. 195[1].
Lygæus bipartitus, Sign. Ann. Soc. Ent. Fr. (3) viii. p. 947. 138[2]; Stål, Hem. Afr. ii. p. 141. 26[3].
L. (*Melanopleurus*) *bicolor*, Stål, En. Hem. iv. p. 109. 33[4].
Lygæus dimidiatus, Walk. Cat. Het. p. 45. 46[5].

Hab. Mexico [4] (*coll. Sallé*, *Mus. Berol.*), Takubaya (*Bilimek*, *Mus. Vind. Cæs.*), Oaxaca [5]; Guatemala, Capetillo, Quezaltenango, San Joaquin (*Champion*).—Brazil [1], Madagascar [2 3 4].

Dr. Signoret is the authority for the Madagascar specimens; and if he has not been misled, the distribution of this species is at present quite inexplicable.

9. Lygæus bistriangularis.

Lygæus bistriangularis, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 329. 3[1]; Town. Glov. Ill. Ins. Ord. Hem. p. 45, t. vi. f. 10; Uhler, Hayden's Surv. Mont. p. 405. 3[2].
Lygæus marginellus, Dall. List Hem. ii. p. 548. 51[3].
Lygæus vicinus, Dall. List Hem. ii. p. 549. 52[4].
L. (*Melanopleurus*) *bistriangularis*, Stål, En. Hem. iv. p. 109. 35[5].
L. (*Melanopleurus*) *marginellus*, Stål, En. Hem. iv. p. 109. 36[6].
Melanopleurus bistriangularis, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 303. 2[7].

Hab. North America [1], Texas [2 7], California [2 7], Arizona [2 7] (*coll. Dist.*).—Central America [2 7]; Mexico [2 5 6 7] (*Bilimek*, *Mus. Vind. Cæs.*); Guatemala, San Gerónimo, Accituno (*Champion*); Panama, Volcan de Chiriqui, 2000–3000 feet (*Champion*).—Colombia [2 5]; Venezuela [3 6], La Guayra [5].

This species greatly resembles the preceding, but is much smaller, with the bucculæ less elevated. Prof. Uhler [2] writes:—"The *L. marginellus* corresponds with the type described by Say; while the *L. vicinus*, Dallas, is the more common variety, which lacks the red lateral margins to the pronotum. Other varieties occur which have only a spot of red on the humeral angles; still others with simply a vestige of red on the posterior edge of the pronotum."

Sternum not wholly black. Anterior and posterior margins of pronotum generally luteous or red. Orificia black. CRASPEDUCHUS, Stål.

10. **Lygæus uhleri.** (Tab. XVI. fig. 12.)

L. (*Craspeduchus*) *uhleri*, Stål, En. Hem. iv. p. 109. 39[1].

MEXICO [1] (*Mus. Berol.*); GUATEMALA, San Gerónimo (*Champion*); COSTA RICA (*Mus. Berol.*); PANAMA, Volcan de Chiriqui, 2000–3000 feet (*Champion*).

In a typical Mexican specimen forwarded to me from the Stockholm Museum, the pronotal markings are red; in a Guatemalan specimen (here figured) the anterior pronotal margin is luteous, whilst in two specimens from Mexico contained in the Berlin Museum all the markings are luteous. These forms probably define the limits of variation in the species.

11. **Lygæus bilimeki,** n. sp.

Black; a spot at base of head, margins of pronotum and a central fascia, terminating about halfway from base, inner and apical claval margins, lateral and apical margins to corium red. Membrane fuscous, apical margin pale luteous. Bucculæ, anterior margin of prosternum, acetabula, and posterior margins of pro-, meso-, and metasternum luteous. Segmental incisures very faintly and obscurely dull reddish or luteous. Rostrum black, not quite reaching posterior coxæ. Antennæ wanting.

Long. 8 millim.

Hab. MEXICO, Orizaba (*Bilimek, Mus. Vind. Cæs.*).

This species is closely allied to *L. uhleri*, from which it differs by the black abdomen &c.

Orificia entirely or towards the apices pallid. OCHROSTOMUS, Stål.

12. **Lygæus guatemalanus,** n. sp. (Tab. XVIII. fig. 2.)

Body above black. Head somewhat thickly pilose, with a small pale and very indistinct spot at base. Pronotum with the anterior and posterior margins narrowly and obscurely, the lateral margins broadly, a central longitudinal fascia which faintly reaches anterior margin, but which is connected near its apex to lateral margins by a transverse fascia, lateral margins of corium (broadest at base), apex of scutellum, and anterior and apical margins of clavus narrowly, luteous. Membrane glossy black, apical margin very pale luteous. Underside of head, antennæ, rostrum, sternum, and legs black; lateral margins of sternum broadly luteous; anterior and posterior margins of prosternum, and posterior margin of mesosternum, and anterior acetabula narrowly and obscurely luteous. Intermediate and posterior coxæ and abdomen ochraceous, the last with the apical segment and a marginal streak on the penultimate segment black (on the fourth segment there is also a fainter indication of the same).

Long. 7 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

This species is allied to *L. uhleri*, Stål, from which it can be at once distinguished by the different markings of the pronotum and corium. The pronotum is also deeply impressed at the transverse luteous fascia.

We have received but one specimen from Mr. Champion.

13. **Lygæus pyrrhopterus.** (Tab. XVII. fig. 6.)

L. (*Ochrostomus*) *pyrrhopterus*, Stål, En. Hem. iv. p. 110. 40[1].
Ochrostomus pyrrhopterus, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 303. 1[2].

Hab. North America, Texas [2].—Mexico [1 2], Tacubaya (*Bilimek*, *Mus. Vind. Cæs.*).

The figure is from a Mexican typical specimen in the Stockholm Museum. As Stål remarks, this species is very likely to be confounded with *L. bistriangularis*; but, in addition to the subgeneric characters, it is smaller (5 to 6 millim. in length), and the rufous colour is much more obscure. The black vittæ near the lateral margins of the abdomen beneath, as described by Stål, are very inconstant, and only exist in one specimen of the series now before me.

14. **Lygæus dispar.** (Tab. XVIII. fig. 5.)

Lygæus (*Ochrostomus*) *dispar*, Stål, En. Hem. iv. p. 110. 42[1].

Hab. Panama, Caldera, David (*Champion*).—Colombia, Bogota [1].

This is a very variable form, though I have felt little hesitation in identifying the Central-American specimens as belonging to Stål's species. All the specimens now before me have the pale veins to the corium—a variable character mentioned by Stål. The Panama specimen figured agrees with the description in having only the apical margin of the scutellum luteous; in the remainder of the series some have an additional pale central carinate line, and others the entire scutellar margin luteous.

15. **Lygæus thoracicus.** (Tab. XVI. fig. 16.)

Lygæus thoracicus, Stål, Stett. ent. Zeit. xxiii. p. 309. 201[1].
L. (*Ochrostomus*) *thoracicus*, Stål, En. Hem. iv. p. 110. 45[2].

Hab. Mexico [1]; Guatemala, San Gerónimo (*Champion*).

The specimen figured is from Guatemala, and measures in length $8\frac{1}{2}$ millim. The type, in the collection of Dr. Signoret, and which I have had the privilege to examine, has only a length of 7 millim. The species therefore varies considerably in size.

16. **Lygæus plagiatus.** (Tab. XVIII. fig. 11.)

Head black; pronotum red, with two black spots on disk and two slightly waved, short transverse streaks at base. Scutellum black. Corium dark fuscous, lateral margins (broadest at base), apical, and claval inner and apical margins narrowly red. Membrane black. Body beneath and legs black; lateral margins to prosternum widely and angularly red; a narrow obscure central longitudinal red line to abdomen; segmental incisures and lateral margins very narrowly and obscurely ochraceous. Rostrum black, and reaching posterior coxæ. Antennæ black.
Long. 10 millim.

Hab. Mexico, Orizaba (*Bilimek*, *Mus. Vind. Cæs.*).

This species has the pronotum marked above as in *L. nigriguttulus*, Stål; but in shape and general coloration it is more closely allied to *L. thoracicus*, Stål.

17. **Lygæus pulchellus.**

Lygæus pulchellus, Fabr. Ent. Syst. iv. p. 159. 83; Syst. Rhynch. p. 225. 105[1]; H.-S. Wanz. Ins. ix. p. 199; Dall. List Hem. ii. p. 549. 55[2]; Guér. in Sagra's Hist. de Cuba, Ins. p. 395[3].
Lygæus bimarginatus, H.-S. Wanz. Ins. viii. p. 105, f. 877[4].
Lygæus (*Lygæus*) *pulchellus*, Stål, Hem. Fabr. i. p. 71. 5.
L. (*Ochrostomus*) *pulchellus*, Stål, En. Hem. iv. p. 111. 46[5].

Hab. Mexico[5] (*Mus. Berol.*).—Antilles[1 5], Jamaica[2], Cuba[3 4].

18. **Lygæus pallido-cinctus.** (Tab. XVI. fig. 11.)

Lygæus pallido-cinctus, Stål, Stett. ent. Zeit. xxiii. p. 310. 206[1].
L. (*Ochrostomus*) *pallido-cinctus*, Stål, En. Hem. iv. p. 111. 47[2].

Hab. Mexico[1 2] (*coll. Sallé, Mus. Vind. Cæs.*); Guatemala, Capetillo (*Champion*).

A Mexican specimen is here figured.

19. **Lygæus conjunctus,** n. sp. (Tab. XVIII. fig. 3.)

Obscure fuscous, thickly pilose. Head somewhat ochraceous and thickly pilose. Pronotum with the anterior, posterior, and lateral margins and a narrow central longitudinal fascia luteous. Lateral margins and apex of scutellum, apical margins of clavus, and lateral and posterior margins of corium luteous. Membrane black, with the apical margins narrowly pale hyaline. Sternum pale reddish fuscous; lateral margins, anterior margin of prosternum, and posterior margins of pro-, meso-, and metasternum, coxæ, and lateral margins of abdomen luteous. Abdomen dull reddish, apical segment very pale fuscous, segmental incisures and stigmata fuscous. Antennæ, rostrum, and legs fuscous.
Long. 7 millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

Allied to *L. pallido-cinctus*, but differs by its smaller size, the central fascia to pronotum, the different colour of abdomen, &c.

20. **Lygæus pallescens.** (Tab. XVII. fig. 7.)

Lygæus pallescens, Stål, Stett. ent. Zeit. xxiii. p. 310. 205[1].
L. (*Ochrostomus*) *pallescens*, Stål, En. Hem. iv. p. 111. 49[2].

Hab. Mexico[1 2], Orizaba (*Bilimek, Mus. Vind. Cæs.*).

A typical specimen in the Stockholm Museum is here figured.

Var. *a*. (Tab. XVII. fig. 10.)

This is a melanic form, and apparently of a constant local character in specimens received from Panama. The four dark spots across the pronotum are present in typical Mexican specimens, but are there much paler and more fused. The membrane is much darker; and the veins appear concolorous.

Hab. Panama, Volcan de Chiriqui, 2000–3000 feet (*Champion*).

21. **Lygæus interstinctus,** n. sp. (Tab. XVII. fig. 8.)

Dull ochraceous, irregularly shaded with fuscous. Head ferruginous. Anterior, posterior, and lateral margins and a central longitudinal fascia to pronotum, a central longitudinal fascia, lateral margins, and apex to

scutellum, outer, inner, and apical margins of clavus, lateral and apical margins and longitudinal veins to corium luteous. Membrane pale fuscous, with the veins much darker, and the apical margin somewhat broadly pale fuliginous. Sternum pale reddish fuscous; lateral margins, anterior margin of prosternum, posterior margins of pro-, meso-, and metasternum and coxæ luteous. Abdomen generally pale reddish, sometimes dull ochraceous (if reddish, then apical segment dull ochraceous). Stigmata fuscous. Antennæ pale fuscous; legs dull ochraceous.

Long. $5\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui, 2000–3000 feet (*Champion*).

This species is allied to *L. pallescens*, Stål, and *L. obsoletus*, Stål; from the first it differs by the pale veins to the corium, and from the second by the longitudinal pale fascia and different markings to the pronotum.

22. **Lygæus cruentatus,** n. sp. (Tab. XVII. fig. 9.)

Head pale luteous, ocelli red, eyes black, apex fuscous, from which two pale and obscure fuscous arcuated streaks extend backwards to ocelli. Pronotum ochraceous, posterior portion more or less fuscous, with the margins and a central longitudinal vitta pale luteous, and with two large transverse red fasciæ situated a little before anterior margin and on each side of central vitta. Scutellum fuscous, with a central longitudinal luteous fascia. Corium fuscous, the lateral margins broadly and the apical margins of clavus and corium very narrowly and indistinctly luteous. Membrane fuscous, with a broad, pale, central longitudinal fascia. Underside of body pale luteous, two red streaks on lateral margins of prosternum, a reddish spot on each lateral side of metasternum, and a longitudinal stigmatal fuscous line on each side of abdomen extending about halfway from base. Legs luteous, apices of femora, tibiæ, and tarsi fuscous. Antennæ fuscous.

Long. 7 millim.

Hab. PANAMA (*coll. Dist.*).

23. **Lygæus venosus,** n. sp. (Tab. XVI. fig. 18.)

Lygæus poeyi, Guér., var.?

Pale stramineous. Head above ochraceous, with the ocelli, eyes, and a short central, longitudinal, apical fascia, widened transversely at its base, black. Pronotum with the lateral margins (broadest posteriorly), two transverse fasciæ near anterior margin, a central longitudinal line on posterior portion of disk, on each side of which is a broad fascia, in shape somewhat like a reversed letter **L**, pale fuscous, and with two waved lines situated at apices of these fasciæ black. Scutellum with basal margin and a **T**-shaped fascia near apex pale fuscous. Corium somewhat infuscated, with a lateral basal angle distinctly ochraceous, the veins and outer claval margin pale fuscous, and lateral and apical margins narrowly stramineous. Membrane pale fuscous, with the veins much darker. Underside of body pale stramineous; prosternum with a pale fuscous submarginal border, a transverse pale fuscous vitta on each side of pro-, meso-, and metasternum; a submarginal red line on each side of abdomen, between which the segmental incisures are also more or less red. Antennæ and rostrum fuscous, the last reaching the posterior coxæ. Legs pale stramineous beneath, and more or less pale fuscous above.

Long. 6 to 7 millim.

Hab. MEXICO, Orizaba (*Bilimek, Mus. Vind. Cæs.*); GUATEMALA, El Reposo (*Champion*); PANAMA, Volcan de Chiriqui, 2000–3000 feet (*Champion*).

Closely allied to the Cuban species, *L. poeyi*, Guér., of which it may be a variety. Stål, in his 'Hemiptera Mexicana,' recorded that species from Mexico, but only gives the habitat Cuba in his subsequent 'Enumeratio' (pt. iv.). The markings of the pronotum are different from those of Guérin's figure.

24. **Lygæus verecundus,** n. sp. (Tab. XVIII. fig. 6.)

Pale stramineous. Head ochraceous, with the apex, a lunate spot at base, ocelli, and eyes black. Pronotum with the lateral margins, a broad transverse fascia near anterior margin, and a central pale, narrow, longitudinal line luteous; in the transverse fascia are two obliquely waved black lines. Scutellum fuscous, with a large cruciform luteous fascia. Corium with the lateral margins luteous, the two main longitudinal veins and an apical claval streak dark chocolate-brown. Membrane very pale dull ochraceous; basal margins narrowly chocolate-brown, and the basal veins somewhat darker. Underside of body pale ochraceous; sternum with the posterior margins of each segment somewhat paler, and with two transverse black lines near anterior coxæ, which are united near lateral margin; a transverse black line near lateral margins of meso- and metasternum, and a black spot near posterior coxæ. Abdomen with a series of transverse stigmatal black lines, and with the apical segment paler. Antennæ and rostrum pale fuscous; legs dark ochraceous, with the tarsi pitchy.

Long. 9 millim.

Hab. GUATEMALA, near the city (*Champion*).

This species is allied to *L. modestus*, Stål, from which it differs by the dark veins to corium, its smaller size, &c.

— *Head totally or posteriorly black, without a pale basal spot.* MELANOCORYPHUS, Stål.

Melanocoryphus, Stål, En. Hem. iv. pp. 99 & 111.

Stål originally regarded this division as a subgenus under the above name, but afterwards treated it as of generic rank. The colour of the head, however, appears to be the only character relied upon by that author to separate it from *Lygæus*, which, in my view, does not render it less congeneric than some of the previously enumerated divisions. Moreover, in one species subsequently referred to here (p. 187), *M. vittiscutis*, Stål, the head is sometimes luteous, with but two black basal spots.

This group is almost confined to tropical and subtropical America, but is also represented in South Africa.

25. **Lygæus nigrinervis.** (Tab. XVIII. fig. 7.)

M. (*Melanocoryphus*) *nigrinervis,* Stål, En. Hem. iv. p. 112. 4[1].

Hab. MEXICO [1].—VENEZUELA [1], La Guayra (*coll. Signoret*).

The Mexican type in the collection of Dr. Signoret is here figured.

26. **Lygæus bicrucis.** (Tab. XVI. figg. 14, 15.)

Lygæus bicrucis, Say, Journ. Ac. Phil. iv. p. 322. 3; Compl. Writ. ii. p. 246. 3[1]; Town. Glover, Ill. Ins. Ord. Hem. p. 45, tab. i. f. 3.

Lygæus flavo-marginellus, Stål, Freg. Eug. Resa, Ins. p. 241. 53[2].

Lygæus rubescens, Stål, Rio Jan. Hem. i. p. 37. 5[3].

Lygæus bitransversus, Sign. Ann. Soc. Ent. Fr. (3) viii. p. 947. 140.

M. (*Melanocoryphus*) *bicrucis,* Stål, En. Hem. iv. p. 113. 6[4].

Melanocoryphus bicrucis, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 304. 3[5].

Hab. NORTH AMERICA [1], Georgia [5], Texas [5] (*Boll, Mus. Vind. Cæs.*), Florida [5], Cali-

fornia [2 4 5] (*coll. Dist.*), Nevada [5], New Mexico [5].—Mexico (*Mus. Berol.*), Jalapa (*Höge*), Puebla (*Bilimek, Mus. Vind. Cæs.*); Guatemala, Panajachel, El Reposo (*Champion*). —Colombia [4] (*Mus. Vind. Cæs.*), Bogota [4]; Venezuela; La Guarra [4], Brazil, Ega, Amazons (*de Mathan, coll. Oberthür*), Rio Janeiro [3 4].

According to Mr. Glover, this insect in Maryland is found under bark in winter. Prof. Uhler [5] states that nothing is yet known as to its food-plant.

The two varietal forms here figured are from Guatemala and Mexico.

27. **Lygæus nigriguttulus.** (Tab. XVII. fig. 11.)

M. (*Melanocoryphus*) *nigriguttulus*, Stål, En. Hem. iv. p. 113. 8[1].

Hab. Mexico, Orizaba (*Bilimek, Mus. Vind. Cæs.*); British Honduras, river Sarstoon (*Blancaneaux*).

A typical specimen in the Stockholm Museum is here figured.

28. **Lygæus circumlinitus,** n. sp. (Tab. XVII. fig. 13.)

Black, pilose. Pronotum with the margins and a central longitudinal line pale reddish. Scutellum with a very pale reddish central longitudinal fascia, which commences near base, and is continued along the claval apical margins. Corium with the lateral and apical margins pale reddish. Membrane black. Underside of the body pale reddish; head, antennæ, rostrum, a rounded spot on each side of prosternum near posterior margin, meso- and metasternum, and legs black; posterior margins of pro-, meso-, and metasternum pale obscure luteous. Apical segment of abdomen faintly infuscated.

Long. 5–6 millim.

Hab. Guatemala, Capetillo (*Champion*).

Allied to *L. circumlitus*, Stål; but the colour of the abdomen, the markings of the pronotum and its very much smaller size will at once distinguish it.

29. **Lygæus circumlitus.** (Tab. XVI. fig. 13.)

Lygæus circumlitus, Stål, Stett. ent. Zeit. xxiii. p. 309. 199[1].

M. (*Melanocoryphus*) *circumlitus*, Stål, En. Hem. iv. p. 113. 10[2].

Hab. Mexico[1], Oaxaca[2], Orizaba (*Bilimek, Mus. Vind. Cæs.*), Ventanas, Durango (*A. Forrer*); Guatemala, Capetillo, Cahabon, Guatemala city (*Champion*).

A Guatemalan specimen is here figured.

30. **Lygæus circumplicatus,** n. sp. (Tab. XVIII. fig. 4.)

Black, pilose. Pronotum with the anterior and posterior margins, lateral margins halfway from base, and a central longitudinal fascia, which also extends broadly only halfway from base, pale reddish. Scutellum black and unicolorous. Corium very pilose; lateral margin, and a slightly curved basal submarginal streak, pale reddish; apical claval margin, and apical margin to corium, narrowly and obscurely dull ochraceous. Membrane black. Head and sternum beneath black, the posterior margins of the segments of the last somewhat paler; abdomen obscure reddish or ochraceous, with a stigmatal row of transverse black lines; segmental incisures also narrowly black. Antennæ and rostrum black.

Long. 5 millim.

Hab. Guatemala, Quezaltenango, Capetillo (*Champion*).

The markings of this species ally it to *L. circumlitus*, Stål, from which it differs by the much smaller size, unicolorous scutellum, the strongly pilose corium, and different markings, &c.

31. **Lygæus rubriger.** (Tab. XVII. fig. 12.)

Lygæus rubriger, Stål, Stett. ent. Zeit. xxiii. p. 309. 200[1].
M. (*Melanocoryphus*) *rubriger*, Stål, En. Hem. iv. p. 113. 11[2].

Hab. North America, Carolina[2].—Mexico[1], Vera Cruz[2].

The type, in the collection of Dr. Signoret, is here figured.

32. **Lygæus lateralis.** (Tab. XVIII. fig. 1.)

Lygæus lateralis, Dall. List Hem. ii. p. 550. 58[1].
M. (*Melanocoryphus*) *lateralis*, Stål, En. Hem. iv. p. 113. 12[2].

Hab. North America, Texas[2].—Mexico[1 2] (*Mus. Berol.*), Cuernavaca (*Bilimek*, *Mus. Vind. Cæs.*).

The specimen figured is in the Vienna Museum, which differs slightly from Mr. Dallas's description in having the anterior margin and also the lateral angles red. These characters apply also to all the specimens which I have examined, and are in agreement with the description given by Stål[2] of examples in the Stockholm Museum.

33. **Lygæus vittiscutis.** (Tab. XVII. fig. 14.)

Lygæus vittiscutis, Stål, Stett. ent. Zeit. xxiii. p. 310. 203[1].
M. (*Ochrimnus*) *vittiscutis*, Stål, En. Hem. iv. p. 113. 14[2].

Hab. Mexico[1 2] (*Mus. Berol.*), Orizaba (*Bilimek*, *Mus. Vind. Cæs.*); Guatemala, Capetillo (*Champion*); Nicaragua, Chontales (*Janson*).

This is a variable species. The Guatemalan specimens examined have the head luteous, with two black spots, thus bringing into doubt the generic value of the colour of the head relied upon by Stål. That this is not a southern characteristic is evidenced by a Nicaraguan specimen which agrees with typical Mexican forms, of which I have examined the type in the collection of Dr. Signoret, and also a typical specimen identified by Stål in the Stockholm Museum. In the Guatemalan specimens now before me the lateral black borders to the sternum and abdomen are very indistinct and almost obsolete.

34. **Lygæus consanguinitas,** n. sp. (Tab. XVIII. fig. 12.)

Head black; pronotum luteous, with two broad and somewhat fused transverse black fasciæ near anterior margin, from which proceed posteriorly two other gradually widening fasciæ of the same colour, which terminate near posterior margin, and are there outwardly angulated. Scutellum fuscous; a central line commencing halfway from base, apex, and lateral margins luteous. Corium fuscous; lateral and apical

margins and apical claval margins narrowly luteous. Membrane black (its apex mutilated). Underside of body and legs fuscous; bucculæ, anterior margin to prosternum, acetabula, posterior margins to pro-, meso-, and metasternum, coxæ, bases of femora, and lateral margin of abdomen luteous. Lateral margins of sternum yellow, much the broadest at base of prosternum. Rostrum and antennæ fuscous, the former reaching posterior coxæ.

Long. $4\frac{1}{2}$ millim.

Hab. Mexico, Cuernavaca (*Bilimek, Mus. Vind. Cæs.*).

This species is apparently (the apex of the membrane being mutilated) somewhat allied to *L. vittiscutis*, Stål.

35. **Lygæus variegatus.** (Tab. XVIII. fig. 9.)

Cimex variegatus, De Geer, Mém. iii. p. 342, t. 34. f. 23.
Cimex erythrochlorus, Gmel. Syst. Nat. i. 4, p. 2180. 453.
Lygæus pulcher, Fabr. Syst. Rhynch. p. 225. 104.
Lygæus variegatus, Dall. List Hem. ii. p. 539. 21[1].
L. (*Lygæus*) *variegatus*, Stål, Hem. Fabr. i. p. 71. 4.
M. (*Melanocoryphus*) *variegatus*, Stål, En. Hem. iv. p. 112. 5[2].

Hab. Panama, Buguba, Chiriqui (*Champion*).—North Brazil[2], Para[1].

Body and legs ochraceous.

36. **Lygæus aureus,** n. sp. (Tab. XVIII. fig. 13.)

Body above dull ochraceous; corium and lateral angles to pronotum bright ochraceous. Membrane black. Underside of body and legs dull ochraceous. Abdomen (excluding apex), lateral angles of prosternum, and lateral margins of meso- and metasternum bright ochraceous. Rostrum and antennæ dull ochraceous, the former reaching posterior coxæ.

Long. 6 millim.

Hab. Mexico, Orizaba (*Bilimek, Mus. Vind. Cæs.*).

I place this peculiarly and distinctly marked species at the end of the Central-American species of the genus *Lygæus*.

ACROLEUCUS.

Acroleucus, Stål, En. Hem. iv. pp. 99 & 114 (1874).

This genus differs primarily from *Lygæus* in having the membrane black or fuscous, with a broad pale apical margin, or a triangular apical spot of the same colour. Other characters relied upon by Stål are—"Femoribus inermibus" and "Capite interdum pone oculos tumescente."

Acroleucus appears to be confined to the Neotropical Region, but is more numerously represented south of Central America.

1. **Acroleucus subniger,** n. sp. (Tab. XVIII. fig. 10.)

Head, pronotum, scutellum, and body beneath red. Apex of central lobe to head, eyes, a transverse fascia at base of pronotum, corium (excepting base), legs, and antennæ black. Base of corium and base of first

joint of antennæ red. Membrane fuscous, with a very broad pale hyaline margin. Rostrum fuscous, long, almost reaching third abdominal segment.
Long. 11 millim.

Hab. Costa Rica (*Mus. Berol.*).

Apparently allied to *A. signoreti*, Stål, from which, however, its very different colour and markings alone will separate it.

2. **Acroleucus brevicollis.** (Tab. XVII. fig. 15.)

Lygæus brevicollis, Stål, Stett. ent. Zeit. xxiii. p. 311. 209[1].
Acroleucus brevicollis, Stål, En. Hem. iv. p. 115. 9[2].

Hab. Mexico[1 2] (*Helfer*, *Mus. Vind. Cæs.*).

The type, in the collection of Dr. Signoret, is here figured.

3. **Acroleucus tullus.** (Tab. XVII. fig. 16.)

Lygæus tullus, Stål, Stett. ent. Zeit. xxiii. p. 311. 210[1].
Acroleucus tullus, Stål, En. Hem. iv. p. 115. 10[2].

Hab. Mexico[1 2], Orizaba (*Bilimek*, *Mus. Vind. Cæs.*); Guatemala, Senahu, San Juan (*Champion*); Panama, Volcan de Chiriqui, 2000–3000 feet (*Champion*).

This species is very closely allied to the last, but is usually smaller, and, as Stål remarks, "cum eodem hemelytrorum margine costali recto insignis." The posterior margin of the pronotum is not luteous as in the preceding species.

The type, in the collection of Dr. Signoret, is here figured.

4. **Acroleucus vicinalis,** n. sp. (Tab. XVIII. fig. 8.)

Black. Pronotum with the anterior third and a central longitudinal fascia dull red. Scutellum with a pale luteous central fascia, which commences at a short distance from base, and is continued along apical claval margins. Corium with the lateral and apical margins pale luteous, the former distinctly widened at base. Membrane black, apical margin widely pale hyaline. Underside of head black; prosternum reddish; meso- and metasternum black, with the posterior margins and acetabula dull ochraceous; abdomen pale ochraceous, a broad submarginal fascia and apical segment black. Antennæ, rostrum, and legs fuscous; trochanters much paler.
Long. 5 millim.

Hab. Panama, David (*Champion*).

Allied in general appearance to *Lygæus vittiscutis*, Stål, but smaller, with the pronotum more quadrate, and the colour-markings different.

Division **ORSILLARIA.**

Orsillaria, Stål, En. Hem. iv. pp. 98 & 119 (1874).
Nysiina, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 304 (1875).
Nysiinæ, Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 409 (1877).

This division was founded by Stål on the following characters:—"Alis decoloribus

vel sordide subalbido-hyalinis; margine apicali corii prope apicem clavi sinuato; angulo apicali tuberculorum antenniferorum prominulo, acuto vel acutiusculo; segmento dorsali ultimo marium mihi cognitorum apice plus minus rotundato, segmento genitali marium foveato."

Three extra-European genera at present exist—one, according to present knowledge, confined to the Nearctic Region, one principally Palæarctic, but also recorded from North America, and the other probably cosmopolitan, and represented in this fauna.

NYSIUS.

Nysius, Dallas, List Hem. ii. pp. 531 & 551 (1852); Stål, En. Hem. iv. p. 119 (1874).
Cymus, subg. *Artheneis,* Flor, Rh. Livl. i. p. 287 (1860).
Nysius, subg. *Rhypodes,* Stål, Hem. Fabr. i. p. 76 (1868).
Nysius, subg. *Macroparius, Nysius* et *Ortholomus,* Stål, Öfv. Vet.-Ak. Förh. 29. 7, p. 43 (1872).

The position of the posterior acetabula, "leviter distantibus," and the unarmed anterior femora are the strongest differential characters of this genus, the distribution of which, as we have previously remarked, is probably cosmopolitan.

One species is at present here alone enumerated. This is evidently an inadequate return; for doubtless many more exist. A Mexican one in the collection of the Berlin Museum has passed through my hands, so closely allied to *N. simulans,* Stål, from Buenos Ayres, that I did not feel justified, without the examination of a series of specimens, either in identifying it as that species or describing it as new.

1. Nysius spurcus.

Nysius spurcus, Stål, Freg. Eug. Resa, Ins. Hem. p. 243. 58 [1]; Stett. ent. Zeit. xxiii. p. 311. 211 [2] En. Hem. iv. p. 120. 2 [3].

Hab. Mexico [2] (*Mus. Berol.*); Honduras [1].—Brazil, Rio Janeiro [1]; Taiti [1 3].

There seems to be some confusion as to the habitat of this species. Although "Insula Taiti" is twice given by Stål (see *suprà*), he, however, records a single specimen from Honduras sent by Dom Hjalmarson [1], and also enumerates both male and female in his 'Hemiptera Mexicana' [3]. A Mexican specimen in the Berlin Museum seems to agree well with Stål's description.

Subfam. *CYMINÆ.*

Cymida, Stål, Hem. Afr. ii. p. 121 (1865).
Cymina, Stål, En. Hem. iv. p. 123 (1874).
Cyminæ, Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 409 (1877).

This subfamily of the Lygæidæ is recognized by the hemelytra being wider than the abdomen. It has been divided into two divisions.

Division ISCHNORHYNCHARIA.

Ischnorhyncharia, Stål, En. Hem. iv. p. 123 (1877).

This division can be at once separated from the division Cymaria by the single character "commissura scutello haud longiore."

NINUS.

Ninus, Stål, Freg. Eug. Resa, Ins. Hem. p. 252 (1859); En. Hem. iv. p. 170 (1874).

This very peculiar genus, which was founded by Stål for a single species from the island Guam, was originally placed by him near his *Cymus franciscanus*, which is a synonym of *Ischnorhynchus resedæ*, Panz. He afterwards, however, in the fourth part of his 'Enumeratio Hemipterorum' placed it only in "genera et species Lygæidarum incerti loci systematici." I cannot, however, consider that he erred in placing it as he originally did, and have been compelled myself to follow that course.

It is at once recognized by the elongated body, exserted eyes, and the deep emargination of the costal margin of corium near base. The antennæ have the basal joint not or scarcely passing apex of head; and the second and fourth joints are subequal in length.

1. **Ninus notabilis**, n. sp. (Tab. XIX. fig. 4.)

Head piceous, more or less clothed with ochraceous pubescence; eyes dark castaneous; antennæ ochraceous and pilose, first joint shortest and globosely incrassated, second and fourth subequal, a little longer than third, fourth thickened and pale castaneous. Pronotum castaneous, sparingly clothed with ochraceous pubescence, and with two transverse black fasciæ near anterior margin. Scutellum castaneous, somewhat coarsely punctate and wrinkled at base, where it is also clothed with ochraceous pubescence, and with a raised, central, longitudinal ochraceous line near apex. Clavus somewhat paler, the apical margins ochraceous, and apex fuscous. Corium pale ochraceous hyaline, the margins ochraceous, and apical angles fuscous. Membrane pale hyaline. Underside of head and sternum castaneous, coarsely punctate, the last with four lateral black spots—situated two on prosternum, one on mesosternum, and one on metasternum. Abdomen beneath very pale ochraceous; legs ochraceous, femora castaneous, and apices of the tarsi pitchy.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Panajachel (*Champion*).

The eyes are strongly exserted and slightly directed backwards. The pronotum is gradually widened posteriorly, and somewhat gibbous near the lateral angles, which are broadly rounded. The posterior margin of the pronotum is subequal in width to that of the head between outer margins of eyes.

This species is allied to *N. insignis*, Stål, from which it differs by the absence of the costal spot to corium, the unicolorous membrane, pale-coloured tibiæ, &c.

NEONINUS, n. gen.

Closely allied to *Ninus*, but differs by having the first joint of the antennæ distinctly passing the apex of the head, and the second joint much longer than the fourth, which is subequal in length to the third; the fourth joint is also strongly incrassated. The head is more elongate, the eyes less prominently exserted, and the pronotum more elongate and narrowed anteriorly than in Stål's genus.

1. **Neoninus illustris**, n. sp. (Tab. XIX. fig. 5.)

Head, pronotum, scutellum, clavus, and base of corium dark fuscous, thickly clothed with pale greyish pubescence. Head coarsely punctate; ocelli prominent and black; antennæ with the first and fourth joints dark castaneous, the second and third pale luteous, first shortest and globosely incrassated, second longest and longer than fourth, apical joint much thickened. Pronotum coarsely punctate, with a central pale longitudinal line, less pubescent and more fuscous posteriorly, and with two pale, transverse and waved fasciæ, situated a little before anterior margin. Scutellum coarsely punctate, with the basal angles and a central longitudinal line pale greyish. Clavus with the usual series of punctures, and with the apex broadly dark fuscous. Corium pale luteous hyaline, with the basal angle greyish pubescent, beyond which it is slightly dark fuscous, apical angles fuscous. Membrane pale hyaline. Abdomen above greenish. Head beneath and sternum fuscous, clothed with greyish pubescence and coarsely punctate. Rostrum ochraceous, the base fuscous (apex mutilated). Femora castaneous; tibiæ and tarsi pale ochraceous, the last with the apical joint pitchy.

Long. 4 millim.

Hab. GUATEMALA, Torola, Chiacam (*Champion*).

An apparently rubbed specimen, sent by Mr. Champion from Chiacam, has lost the greyish pubescence, thus exhibiting the head, pronotum, scutellum, and clavus dark fuscous.

ISCHNORHYNCHUS.

Cymus, subg. *Lyctus*, Flor, Rh. Livl. i. pp. 287 & 294 (1860).

Ischnorhynchus, Fieb. Eur. Hem. pp. 51 & 199 (1861); Stål, Öfv. Vet.-Ak. Förh. 29. 7, p. 44 (1872); En. Hem. iv. p. 123 (1874).

This genus may be known by the apex of the corium passing the apex of the abdomen, a character which will separate it from the only other American genus at present described. The body is oval; and the apical margin of the corium and claval suture are of nearly equal length.

This genus is represented in the Palæarctic, Nearctic, and Neotropical Regions. There are at present but few described species; but as these are small and obscure, and therefore at present little known from the labours of the average collector, *Ischnorhynchus* may probably have a much wider range and possess many more species.

Dr. Puton has proposed the substitution of the name *Kleidocerus*, Westw., for this genus; but Mr. Douglas has argued (Ent. Mo. Mag. xv. p. 235) that *Kleidocerus* "being merely a name, it cannot supersede *Ischnorhynchus*, which is a genus duly defined by Fieber."

Pronotum not distinctly constricted at apex.

1. **Ischnorhynchus resedæ.**

Lygæus resedæ, Panz. Faun. Germ. 40. 20[1].
Lygæus didymus, Zett. Vet.-Ak. Handl. 1819, p. 71. 20; Fall. Hem. Suec. 50. 4.
Heterogaster resedæ, Schill. Beitr. 89, t. 8. fig. 5.
Cymus resedæ, Burm. Handb. ii. p. 292. 1; Sahl. Geoc. Fenn. 71. 1; Dall. List Hem. ii. p. 586. 2[2].
Lygæus geminatus, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 330. 7[3].
Cymus franciscanus, Stål, Freg. Eug. resa, Ins. p. 252. 84[4].
Ischnorhynchus didymus, Stål, En. Hem. iv. p. 124. 1[5]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 305[6]; ib. iii. p. 409[7].
Ischnorhynchus resedæ, Uhler, Proc. Bost. Soc. Nat. Hist. xix. p. 394[8].

Hab. NORTH AMERICA [2 3 5 8], Canada [6], Texas [6], Colorado [7], California [4 5 6].—MEXICO, Chapultepek (*Bilimek, Mus. Vind. Cæs.*); GUATEMALA, Quezaltenango, Quiche Mts. (*Champion*); PANAMA, Volcan de Chiriqui, 4000 to 6000 feet (*Champion*).—EUROPE [1 5], England [2]; ASIA, Siberia [5].

I can detect no real differences between the Panama and Mexican specimens of this species which I have examined, nor between these and North-American or European representatives. According to Prof. Uhler [8], it is quite common both in the eastern and western sections of the United States, and is found as far north as Lake Winnipeg. Stål also gives habitats ranging from California to Siberia; and even now that we have traced it to the mountains of Panama and Guatemala it may perhaps be accepted as a boreal species, whose presence in these Central-American mountains refers to southern migration at that Glacial period of which Belt found, and has described, so many evidences in this region. Mr. Dallas [2] had previously detected the specific unity of the European and North-American forms.

2. **Ischnorhynchus championi,** n. sp. (Tab. XIX. fig. 3.)

Head and pronotum pale ochraceous, thickly covered with dark punctures; head with apex, four short basal streaks, and eyes blackish. Antennæ with the basal joint shortest, incrassated and fuscous; third and fourth ochraceous, with their bases and apices fuscous; fourth thickened and fuscous, with the basal third ochraceous. Pronotum with two short, waved, transverse fuscous fasciæ near anterior margin. Scutellum pale ochraceous, thickly, coarsely, and darkly punctured at base, a few coarse dark punctures along lateral margins, and a central elongate fuscous spot. Corium pale ochraceous and semihyaline, with two fuscous spots on disk and four along apical margin. Underside of body pale fuscous, thickly and coarsely punctate, with an elongate black spot situated on lateral margins of pro-, meso-, and metasternum, and a series of black spots along abdominal margin. Metasternum very pale luteous and impunctate. Femora and apices of tibiæ castaneous, tibiæ and apices of femora pale ochraceous, apices of tarsi pitchy.
Long. 2½ millim.

Hab. GUATEMALA, Rio Naranjo (*Champion*).

Pronotum constricted at apex.

3. **Ischnorhynchus godmani,** n. sp. (Tab. XIX. fig. 1.)

Head very dark ochraceous, very thickly punctured, eyes reddish. Antennæ with the basal joint shortest,

incrassated and pale castaneous; second and third joints longest, and subequal in length, pale ochraceous and with the apices fuscous; apical joint thickened, a little shorter than third, ochraceous, with the apical half fuscous. Pronotum very dark ochraceous, thickly punctate, anterior margin (narrowly) and a narrow central longitudinal line, extending a short distance from anterior margin, luteous; a spot near lateral angles, and two short waved fasciæ near anterior constriction, fuscous. Scutellum very dark ochraceous, with coarse dark punctures along basal and lateral margins. Clavus ochraceous, with three longitudinal series of dark punctures, and one of the same at apical suture. Corium very pale ochraceous and semihyaline, with some coarse punctures arranged longitudinally on disk, and with the basal angle, a rounded spot on disk, and a large subquadrate spot at apex, which is continued a short distance as a border to apical margin, pale fuscous. Membrane pale hyaline. Head beneath and sternum pale fuscous; legs and abdomen very pale ochraceous.

Long. 4 millim., lat. 2 millim.

Hab. ~~GUATEMALA~~, Caldera (*Champion*).

The pronotum is strongly constricted near anterior margin, and is obtusely dentate before the eyes. It is allied to *I. denticollis*, Stål, a Colombian species.

4. **Ischnorhynchus salvini,** n. sp. (Tab. XIX. fig. 2.)

General shape and size of the preceding species. Head luteous, with coarse brown punctures, eyes castaneous; antennæ luteous, first joint shortest and incrassated, second and third longest and subequal, fourth a little shorter than third, thickened, and with the apical half fuscous. Pronotum luteous, coarsely punctate, with rather more than basal half much shaded with pale fuscous. Scutellum pale luteous, with a few coarse dark punctures along basal and lateral margins, and a very large blackish spot near apex. Clavus pale fuscous, punctured as in *I. godmani*. Corium pale luteous and semihyaline, punctured and marked with fuscous, as in the preceding species, but with the spot on disk connected with the continuation of the subquadrate apical spot. Membrane pale hyaline. Underside of head and pro- and mesosternum luteous, thickly punctured with fuscous; metasternum very pale luteous and impunctate, more or less spotted and suffused with pale fuscous. Abdomen pale fuscous, with the lateral margins broadly luteous. Legs luteous, femora fuscous near base.

Long. 4 millim., lat. 2 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

NINYAS, n. gen.

Eyes very large, exserted, and directed backwards. Antennæ with the basal joint passing the apex of the head, the second and fourth joints subequal in length, apical joint incrassated. Pronotum with the posterior margin slightly convex; lateral margins simple, and with a transverse lævigate callosity near anterior margin; posterior margin subequal in width to that of head, including outer margin of eyes, and wider than anterior margin. Corium with its apex not reaching apex of abdomen, with its lateral margins strongly emarginate a short distance from base, and then much more considerably widened and ampliated to apex. Membrane long, and considerably passing the apex of abdomen.

This genus should have been placed next to *Ninus* and *Neoninus*, with both of which it agrees in not having the apex of the corium extending to the abdominal apex; but from both of these genera it differs by the relative lengths of the antennal joints, by the very large and strongly exserted eyes, and by the transverse callosity near anterior margin of the pronotum, &c.

1. **Ninyas strabo,** n. sp. (Tab. XIX. fig. 6.)

Head above luteous, ocelli and outer surfaces of eyes reddish, a black streak on each side of base near inner margins of eyes. Antennæ with the basal joint luteous; remaining joints luteous, but more or less

infuscated. Pronotum luteous, with a distinct, narrow, pale, lævigate collar at anterior margin; the anterior transverse levigate callosities margined on each side by a row of closely arranged, small, dark punctures; remaining surface coarsely punctate, with two large fuscous spots at base, near lateral angles, and the lateral margins very narrowly fuscous. Scutellum black, with the apex luteous, coarsely punctate, with two yellow levigate spots at base, and a broad central levigate fascia, which about reaches apex, but does not extend to base. Clavus luteous, with two rows of coarse punctures along its outer margin, and a single row of the same on apical portion only of its inner margin. Corium pale luteous and subhyaline, punctate along the radial suture, and thence along the apical margin to apex; apical margin fuscous, excepting about the centre, where it is luteous. Membrane very pale hyaline. Abdomen above luteous, with a broad central black fascia. Underside of body and legs luteous; sternum thickly covered and shaded with dark punctures. Rostrum pale luteous.

Long. $3\frac{1}{2}$–4 millim.

Hab. Panama, Volcan de Chiriqui, 2500–4000 feet, David (*Champion*).

Subfam. *BLISSINÆ.*

Blissida, Stål, Hem. Afr. ii. p. 120 (1865).
Blissina, Stål, En. Hem. iv. p. 129 (1874).

This subfamily is divided from all others of the Lygæidæ by the character of its members having the anterior acetabula remote from the posterior borders of the prosternum. Three genera are found in America, two of which have only been received by us from Central America.

ISCHNODEMUS.

Ischnodemus, Fieber in Weit. Beitr. 1836, p. 337; Stål, Öfv. Vet.-Ak. Förh. 29: 7, p. 44 (1872); En. Hem. iv. p. 129 (1874).
Micropus, Spin. Ess. Hém. p. 218 (1837).
Micropus (part.), Sign. Ann. Soc. Ent. Fr. (3) v. p. 24 (1857).
Blissus (part.), Stål, Hem. Afr. ii. p. 122 (1865).

In this genus the femora are either wholly unarmed, or (more rarely) the anterior femora are obsoletely spinous; the apical margin of the corium is straight. These characters separate *Ischnodemus* from the two other American genera.

Two species are here enumerated as found in Central America. Walker (Cat. Het. v. p. 127) described a Mexican species in this genus under the name of *Ischnodemus longus.* Neither type nor example of that species now exists in the British Museum; and as Walker's species can only be recognized in systematic entomology where types can be examined, as the genera in which his species are placed are so frequently erroneous, this species of *Ischnodemus* (?) must be considered as non-existent.

1. **Ischnodemus sallæi.**

Micropus sallei, Sign. Ann. Soc. Ent. Fr. (3) v. p. 25. 2, pl. 2. fig. 2[1].
Ischnodemus sallei, Stål, En. Hem. iv. p. 131. 4[2].

Hab. Mexico[1] (*Mus. Berol.*), Vera Cruz[2]; Guatemala, Lanquin, Sinanja, El Tumbador, Panima, Sabo (*Champion*); Panama, Volcan de Chiriqui (*Champion*).

There is great variation in the length of the specimens which I have examined, the smallest of which are $6\frac{1}{2}$ millim. long, and the largest measure 9 millim.

2. **Ischnodemus præcultus,** n. sp. (Tab. XIX. fig. 7.)

Head, pronotum, and scutellum black; posterior margin and lateral angles of pronotum ochraceous. Clavus, corium, and membrane pale ochraceous; margins of clavus and corium somewhat darker; a subclaval streak to corium and veins of membrane pale fuscous. Antennæ pale ochraceous; apical joint, excepting base, fuscous. Body beneath black; head and sternum dull and opaque, abdomen shining and somewhat castaneous. Rostrum and legs ochraceous, the first just passing the anterior coxæ, but not reaching the mesosternum. Abdomen above black, the margins ochraceous.

Long. 4–5 millim.

Hab. GUATEMALA, Paso Antonio (*Champion*).

This species is very closely allied to *I. falicus*, Say, from which it differs by the colour of the rostrum and antennæ. The basal ochraceous portion of the pronotum is also smaller than in Say's species, judging from that author's description and Dr. Signoret's figure of the species. As Prof. Uhler has not (so far as I am cognizant) alluded to any variation in *I. falicus*, I have been compelled to describe this insect as a new species.

BLISSUS.

Blissus, Burm. Handb. 2. 1, p. 290 (1835); Stål, Öfv. Vet.-Ak. Förh. 29: 7, p. 45 (1872).
Blissus (part.), Stål, Hem. Afr. ii. p. 122 (1864).

The apical margin of the corium in *Blissus* is obtusely angulated and sinuated near the apex of the clavus, a character which alone will differentiate it from the preceding genus. *Blissus* has a wide habitat, being recorded from South Africa, Abyssinia, and the Oriental and Palæarctic Regions.

1. **Blissus leucopterus.**

Lygæus leucopterus, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 329. 5.
Micropus leucopterus, Sign. Ann. Soc. Ent. Fr. (3) v. p. 31. 11, pl. 2. f. 11; Town. Glover, Ill. Ins. Ord. Hem. p. 48; Riley, Seventh Ann. Rep. Ins. Missouri, 1875, p. 19, figs. 2, 3, & 4.
Blissus leucopterus, Stål, En. Hem. iv. p. 133. 3[1]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 306[2].
Rhyparochromus leucopterus, Packard, Guide Study Ins. 5th edit. p. 543, fig. 547.

Hab. NORTH AMERICA, Wisconsin [1 2], Michigan [2], New Jersey [1], Illinois [1], Texas [2], California [2].—MEXICO (*Bilimek, Mus. Vind. Cæs.*); GUATEMALA, San Gerónimo, Paso Antonio, Panzos, Champerico, Rio Naranjo (*Champion*); PANAMA, Volcan de Chiriqui, 2000–3000 feet (*Champion*).—CUBA [1].

This is the well-known "Chinch Bug," one of the most noxious and injurious insects to the agriculturists of North America. According to Riley the injury is caused by the insect sucking, by the aid of its rostrum, the grasses and cereals, "thereby causing them to shrink, wilt, and wither—and not by biting their substance, as many persons suppose." The multiplication of the insect in North America appears to have been

conterminous with the increase of grain-cultivation in that country; and the injury it occasioned to the "small grains" in the North-western States in 1871 amounted to upwards of thirty million dollars; whilst in 1874 the damage was computed at twice that sum. It has been found by Riley to be two-brooded in some of the United States; and its eggs are deposited "occasionally above ground on the blades of grain—but far more often, and normally, underground, upon the roots of the plants infested." The same author states that though abundantly able to fly, the Chinch Bug does not take to wing readily; and in their immature stage, before their wings are developed, they migrate from field to field on foot, "often in solid columns inches deep." It multiplies most in hot and dry seasons, moisture proving unfavourable to its existence.

With the exception of Cuba, given by Stål, I have met with no record of a more southern habitat for this species than the United States. It is therefore interesting, in a biological if not in an agricultural sense, to find it distributed throughout Central America.

Subfam. *GEOCORINÆ.*

Geocorida, Stål, Hem. Afr. ii. p. 121 (1865).
Geocorina, Stål, En. Hem. iv. p. 133 (1874).
Geocorinæ, Uhler, Bull. U.S. Geol. & Geog. Surv. iii. p. 409 (1877).

In the Geocorinæ the membrane possesses no basal areolet. No thorough knowledge of the distribution of this subfamily is at present obtainable, as its members are small in size and have hitherto, in many large regions, been scarcely at all collected. All conclusions on the general distribution of the Geocorinæ must therefore at present be quite empirical. The extra-European species have been separated by Stål into three genera; and this may probably apply to the whole subfamily as at present known; for though Stål has proposed some new genera for the European species, these have been treated by Dr. Puton as only subgenera of *Geocoris*, a widely distributed genus, and the only one yet received from Central America.

GEOCORIS.

Geocoris, Fall. Spec. Hem. disp. meth. Exh. p. 10 (1814); Stål, Hem. Afr. ii. p. 143 (1865); Ofv. Vet.-Ak. Förh. 29: 7, p. 46 (1872).
Salda, Latr. Règn. An. v. p. 198 (1829); Spin. Ess. Hém. p. 227 (1837).
Ophthalmicus, p., Schill. in Beitr. zur Ent. i. p. 62 (1829).
Ophthalmicus, Fieb. Eur. Hem. pp. 46 & 174 (1861).

Geocoris is at once separated from the only other recorded American genus, *Epipolops*, by the non-petiolated eyes. The genus is probably cosmopolitan, or at least found in all the principal zoological regions.

1. **Geocoris imperialis,** n. sp. (Tab. XVIII. fig. 18.)

Body above bright ochraceous; antennæ, apex of the head, inner margin of eyes, a large sublunate spot at base of pronotum, and scutellum black. Head beneath and prosternum bright ochraceous; base of pro-,

meso-, and metasternum, and abdomen black. Acetabula, coxæ, and legs ochraceous. Rostrum ochraceous, narrowly black at base (apical portion mutilated). Antennæ with the second and third joints distinctly pilose; eyes very large and prominent, most strongly directed outwards at posterior margin. Pronotum with a double row of coarse punctures near anterior margin, and with about basal half also strongly punctate, less prominently so at lateral margins. Scutellum coarsely punctate; three longitudinal series of punctures at claval area, and a number of scattered coarse punctures on disk of corium. Long. 4 millim.

Hab. GUATEMALA, Dueñas (*Champion*).

2. **Geocoris flavilineus.** (Tab. XVIII. fig. 19.)

Geocoris flavilineus, Stål, En. Hem. iv. p. 135. 8[1].

Hab. GUATEMALA, Dueñas, Capetillo (*Champion*).—COLOMBIA, Bogota[1].

The specimen figured is an example received from Dueñas, Guatemala, which apparently agrees in every respect with Stål's description.

3. **Geocoris thoracicus.** (Tab. XVIII. figs. 15 & 16.)

Ophthalmicus thoracicus, Fieb. Wien. ent. Mon. v. p. 281. 31[1].

Geocoris thoracicus, Stål, En. Hem. iv. p. 137. n. 34.

Hab. GUATEMALA, Champerico, San Isidro (*Champion*).—VENEZUELA, La Guayra[1].

The markings of the pronotum in this species are of an extremely variable character, which my examination of a typical specimen in the Berlin Museum, and a long series of specimens from Guatemala, abundantly testifies. Fieber's type, or typical specimen, which I have been afforded an opportunity of examining, agrees more closely with my fig. 16, which, with fig. 15, may be taken as representative of the extreme varietal forms. The course of this variation appears to extend from specimens in which the disk of the pronotum is almost wholly black, with a small luteous fascia both on anterior and posterior margins, through others in which these paler fasciæ are increased anteriorly and posteriorly till they meet and thus form one continuous and dividing longitudinal fascia.

4. **Geocoris lividipennis.** (Tab. XVII. fig. 27.)

Geocoris lividipennis, Stål, Stett. ent. Zeit. xxiii. p. 311. 212[1]; En. Hem. iv. p. 137. 43.

Hab. MEXICO[1].

The type, in the collection of Dr. Signoret, is here figured.

5. **Geocoris punctipes.** (Tab. XVIII. fig. 14.)

Salda bullata, var. *punctipes*, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 336. 2[1].

Ophthalmicus luniger, Fieb. Wien. ent. Mon. v. p. 269. 4[2].

Geocoris punctipes, Stål, En. Hem. iv. p. 135. 9[3]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 306. 2[4].

This appears to be the form described under the name of *O. luniger* by Fieber[2],

considered both by Stål and Uhler to be but a synonym of *E. punctipes*, Say. I have followed these two excellent authorities; but add, at the same time, a full description, as the few specimens I have examined are all perfectly constant, and cannot well be reconciled with Say's description.

Body above pale luteous white. Head with the following black markings—a narrow central longitudinal line, becoming broader posteriorly, and with a waved transverse fascia near centre, on each side of which is a waved longitudinal line, which together enclose a centrally divided cordate spot at base, on each side of which is a rounded spot; inner margin of eyes black, eyes castaneous. Antennæ black, apical joint and extreme apex of third joint dull ochraceous. Pronotum coarsely and darkly punctate, and with two narrow transverse black fasciæ near anterior margin. Scutellum coarsely and darkly punctate, the base and a broad central longitudinal space black, and with a slightly raised, luteous, levigate spot near each basal angle. Clavus longitudinally punctate. Corium sparsely punctate on disk, the lateral margin and apical angle broadly impunctate. Membrane pale hyaline, considerably passing apex of abdomen. Body beneath pale luteous white; sternum with a broad lateral margin of dark punctures; abdomen with a broad fuscous submarginal fascia, and with a dark fuscous impressed spot on the lateral margins of the three apical segments. Legs luteous, spotted with fuscous.
Long. 4 millim.

Hab. North America [1], Carolina [2 3], Texas [3 4] (*Boll. Mus. Vind. Cæs.*); Colorado [4].—Guatemala, Dueñas and near the city (*Champion*).

6. **Geocoris borealis.** (Tab. XVIII. fig. 17.)

Ophthalmicus borealis, Dall. List Hem. ii. p. 585. 8 [1].
Geocoris borealis, Stål, En. Hem. iv. p. 137. 39.

Hab. North America [1].—Guatemala, San Gerónimo (*Champion*), summit of the Volcan de Agua, 12,400 feet (*Champion*).

Prof. Uhler (Bull. U.S. Geol. & Geogr. Surv. ii. p. 306) placed this species as a synonym of *G. bullata*, Say. Subsequently, however (ibid. iii. p. 409), he has treated Say's species as distinct, and, remarking upon its very varietal character, observes that "full series of these varieties are needed to settle the synonymy of this species and its allied forms. Some links, pointing to a connection with *G. pallens*, *borealis*, and *discopterus*, have already been procured; and doubtless still others will occur when closer attention is given to collecting them." Prof. Uhler is the recognized authority on North-American Rhynchota; and I have therefore gladly followed him here. All the Central-American specimens which we have received through Mr. Champion are constant in character and of the form described by Mr. Dallas, of which I have examined the type.

Subfam. *PACHYGRONTHINÆ.*

Pachygronthida, Stål, Hem. Afr. ii. p. 121 (1865).
Pachygronthina, Stål, En. Hem. iv. p. 138 (1874).
Pachygronthinæ, Uhler, Bull. U.S. Geol. & Geogr. Surv. iii. p. 411 (1877).

In the Pachygronthinæ the anterior femora are much thickened, spined beneath, and longer than the anterior tibiæ.

This subfamily is not an extensive one, according to our present knowledge, which is probably exceedingly small. Two genera are found in the Neotropical Region, only one of which is at present recorded from Central America.

PACHYGRONTHA.

Pachygrontha, Germ. in Silb. Rev. v. p. 152 (1837); Stål, Hem. Afr. ii. pp. 146, 147 (1865).
Pachygroncha, Spin. Gen. d'Ins. Artr. p. 140 (1852).
Atractophora, Stål, Öfv. Vet.-Ak. Förh. 1853, p. 260.
Peliosoma, Uhler, Proc. Ac. Philad. 1860, p. 229.
Dilophos, Montr. Ann. Soc. Linn. Lyon (2) ii. p. 226 (1865).

The most characteristic points in this genus are the greater length of the basal joint of the antennæ as compared with the remaining joints, the acute and ampliated outer apices of the lateral lobes of the head, and the pale central longitudinal levigate line to the scutellum.

The genus is already recorded from the Neotropical, Ethiopian, Oriental, and Pacific Regions; but our knowledge on this point is exceedingly inadequate and fragmentary, only one species being here enumerated, a Mexican one described by Stål—no examples having been received in any of the large collections made by Mr. Champion in Central America.

1. **Pachygrontha œdancalodes.** (Tab. XVII. fig. 17.)

Pachygrontha œdancalodes, Stål, En. Hem. iv. p. 139[1].

Hab. Mexico[1].

A typical specimen in the Stockholm Museum is here figured.

Subfam. *MYODOCHINÆ.*

Rhyparochromida, Stål, Hem. Afr. ii. p. 121 (1865).
Myodochina, Stål, En. Hem. iv. p. 142 (1874).
Myodochinæ, Uhler, Bull. U.S. Geol. & Geogr. Surv. iii. p. 411 (1877).

This subfamily is thus characterized by Stål, in a differential comparison with his other subfamilies, "Ventris incisura tertia margines laterales haud attingente, prope latera recurva." It has also been divided into five divisions.

Division **MYODOCHARIA.**

Myodocharia, Stål, En. Hem. iv. p. 142 (1874).

In this division the thorax is always provided with a distinct collar at its anterior margin, and is likewise distinctly constricted about its centre. It at present comprises about twelve extra-European genera, of which only six are at present here included.

LIGYROCORIS.

Ligyrocoris, Stål, Öfv. Vet.-Ak. Förh. 29: 7, p. 51 (1872); En. Hem. iv. p. 144 (1874).

This genus is distinctly marked and easily recognized. The disks of the second and third segments of the abdomen have a lunate excavated non-pubescent vitta on each side, commencing behind the region of the posterior acetabula.

Ligyrocoris is found in the Palearctic, Nearctic, and Neotropical Regions, and is well represented in Central America.

1. **Ligyrocoris multispinus.** (Tab. XVII. fig. 18.)

Ligyrocoris multispinus, Stål, En. Hem. iv. p. 145. 1[1].

Hab. MEXICO[1]; GUATEMALA, Cerro Zunil (*Champion*).

The type, in the collection of the Stockholm Museum, is here figured.

This species is variable in coloration. Stål[1] writes, "parte ferruginea pronoti, femoribus anticis, apiceque femorum posteriorum interdum forte nigris." This variation does not, however, always tend towards melanism, as, in one Guatemalan specimen which I have examined, both lobes of the pronotum are concolorous and ferruginous.

2. **Ligyrocoris litigiosus.** (Tab. XVII. fig. 19.)

Plociomera litigiosa, Stål, Stett. ent. Zeit. xxiii. p. 313. 217[1].

Ligyrocoris litigiosus, Stål, En. Hem. iv. p. 145. 3[2].

Hab. MEXICO[1] (*Mus. Berol.*); GUATEMALA, San Gerónimo, San Joaquin (*Champion*). —COLOMBIA, Bogota[2].

The Mexican type, in the collection of Dr. Signoret, is here figured.

3. **Ligyrocoris delitus,** n. sp. (Tab. XVIII. fig. 20.)

Head piceous, thickly clothed with greyish pubescence, and with a central and somewhat indistinct longitudinal castaneous fascia; ocelli red, eyes black. Antennæ pale fuscous, basal joint, excepting apex, piceous, apical joint dark fuscous. Pronotum fuscous, somewhat sparingly punctate, the posterior lobe paler in colour, and with the lateral margins and three (or four) central fasciæ, which are continued through anterior lobe, darker fuscous; anterior lobe with the lateral and anterior margins narrowly pale greyish. Scutellum black, with two pale spots at base. Corium greyish, with a spot near base and apical third dark fuscous, the last marked with a transverse, broken, pale greyish fascia near apex; clavus streaked with fuscous, especially on apical half. Underside of body dark fuscous. Femora piceous; apices of anterior femora, and bases and apices of intermediate and posterior femora pale ochraceous; tibiæ pale ochraceous, their apices and tarsi fuscous. Membrane very pale fuscous, with the veins pale greyish.

The body is more or less pilose above; the corium is marked with some longitudinal series of punctures; the anterior femora are armed with a series of small spines beneath.

Long. 4 millim.

Hab. GUATEMALA, Panajachel and near the city (*Champion*).

This species is allied to *L. balteatus*, Stål, from which the markings of the pronotum and corium will alone distinguish it.

4. **Ligyrocoris oblitus,** n. sp. (Tab. XIX. fig. 9.)

Head pitchy, thickly covered with greyish pubescence; eyes and antennæ pale brownish, the last with the basal two thirds of the first joint and the whole of the fourth joint pitchy. Pronotum pale brownish, with six longitudinal dark-brown fasciæ, two central and two near lateral margin. Scutellum pitchy, with three raised and paler longitudinal striæ, one central and two lateral. Corium pale stramineous, with a small pitchy spot on disk near base, and with a broad pale brownish streak, commencing about centre of claval margin, and extending along the length of apical margin, where it is broadest; near apical angle this more or less encloses a pale stramineous spot. Membrane very pale and unicolorous whitish hyaline. Body beneath pitchy; sternum more or less covered with greyish pubescence. Anterior femora pitchy, with their apices narrowly ochraceous; intermediate and posterior tibiæ ochraceous, with their apical halves pitchy; tibiæ ochraceous.

Long. 4½–5 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

We have received two specimens of this species from Mr. Champion, which vary in size as stated above; they also vary in the extent of the broad brownish border to the apical margin of the corium, which in the larger specimen becomes obsolete towards the apical angle. The pale white membrane and distinct markings of the pronotum and corium render this an easily recognized species.

5. **Ligyrocoris balteatus.** (Tab. XVII. fig. 20.)

Ligyrocoris balteatus, Stål, En. Hem. iv. p. 145. 4 [1].

Hab. MEXICO [1].

The type, in the collection of the Stockholm Museum, is here figured.

6. **Ligyrocoris abdominalis.** (Tab. XVII. fig. 21.)

Lygæus (*Beosus*) *abdominalis,* Guér. in Sagra's Hist. de Cuba, Ins. p. 397 [1].
Plociomera piligera, Stål, Stett. ent. Zeit. xxiii. p. 312. 216 [2].
Ligyrocoris abdominalis, Stål, En. Hem. iv. p. 146. 5 [3].

Hab. MEXICO [2 3], Orizaba (*Bilimek, Mus. Vind. Cæs.*); GUATEMALA, San Gerónimo, Dueñas, El Jicaro (*Champion*).—CUBA [1].

The specimen figured is the typical *P. piligera,* Stål, described from and contained in the collection of Dr. Signoret. In his description of this species Stål gives the apex of the first joint of the antennæ as "nigro-fuscis;" and in his 'Enumeratio' [3] states as a varietal character "articulo primo antennarum nigro." All the Central-American specimens which I have examined have the basal joint of the antennæ black.

7. **Ligyrocoris infumatus,** n. sp. (Tab. XIX. fig. 8.)

Head, anterior lobe of pronotum, and scutellum black; posterior lobe of pronotum and corium ferruginous, the first with four longitudinal fuscous fasciæ, two central and two lateral; the corium with a spot near base; a broad, irregular transverse fascia near apex, and apical angle fuscous. Membrane opaque, fuscous, with the veins pale at base. Antennæ ochraceous, apex of third joint, and more than apical half of

fourth fuscous. Body beneath fuscous; legs ochraceous; anterior femora, excepting apex, apices of intermediate and posterior femora, apices of tibiæ, and last joint of tarsi fuscous. The body above is sparingly pilose, the posterior lobe of the pronotum is sparingly but coarsely punctate; the corium is punctured in longitudinal series; and the anterior femora are armed beneath with a few small spines near apex.

Long. 6 millim.

Hab. GUATEMALA, Quiche Mountains (*Champion*).

In one specimen examined the whole of the apical joints of the antennæ are fuscous. This observation has prevented me from following Stål in using the colour of the apical joint of the antennæ as a sectional character by which to divide the species of the genus.

MYODOCHA.

Myodocha, p., Latr. Gen. Ins. iii. p. 126 (1807); Règne An. v. p. 199 (1829).
Myodochus, Oliv. Enc. Méth. viii. p. 105 (1811).
Chiroleptes, Kirby in Rich. Faun. Bor.-Am. iv. p. 280 (1837).
Myodocha, A. & S. Hist. des Hém. p. 256 (1843); H.-S. Wanz. Ins. ix. pp. 192 & 212 (1853); Stål, En. Hem. iv. p. 144 (1874).

In this genus the head is longer than the pronotum, and is placed at the end of a long, exserted, cylindrical neck. The basal joint of the antennæ moderately passes the apex of the head.

Myodocha is found both in the Nearctic and Neotropical Regions.

1. **Myodocha longicollis.** (Tab. XVII. fig. 22.)

Myodocha longicollis, Stål, En. Hem. iv. p. 146. 1[1].

Hab. MEXICO[1]; GUATEMALA, San Gerónimo, San Juan (*Champion*).

A typical specimen in the Stockholm Museum is here figured.

2. **Myodocha intermedia**, n. sp.

Closely allied to *M. longicollis* and *M. giraffa*. It differs from *M. longicollis* by the somewhat shorter neck (in one specimen, however, this is equal in size), femora distinctly annulated on fuscous portion near apex, and anterior femora armed beneath with a double series of short, stout spines, the longest of which is situated on the annulated portion near apex. From *M. giraffa* it differs by the much longer neck, larger size, and more numerously spined anterior femora.

Long. 11–12 millim.

Hab. MEXICO, Orizaba (*Mus. Vind. Cæs.*); GUATEMALA, Pantaleon, Aceituno, Senahu (*Champion*).

I have been compelled to give this form a distinctive name, though I should not be surprised if it were ultimately proved to be but a variety of *M. giraffa*. I have great doubts about the length of the neck being a constant specific character in this genus; it is certainly variable in the specimens of *M. intermedia* now before me.

3. **Myodocha giraffa.** (Tab. XVII. fig. 23.)

Myodocha giraffa, Stål, Stett. ent. Zeit. xxiii. p. 314. 220[1]; En. Hem. iv. p. 147. 2[2].

Hab. Mexico [1 2].

The type in the collection of Dr. Signoret is here figured.

4. **Myodocha unispinosa.** (Tab. XVIII. fig. 22.)

Myodocha unispinosa, Stål, En. Hem. iv. p. 147. 3[1].

Hab. Guatemala, Zapote, San Juan, San Gerónimo (*Champion*); Panama, Volcan de Chiriqui, 2000–3000 feet (*Champion*).—Colombia (*Mus. Vind. Cæs.*); Venezuela, La Guayra[1].

A specimen from Panama is here figured.

5. **Myodocha inermibus.** (Tab. XVIII. fig. 23.)

Head and anterior lobe of pronotum black, the last with the lateral margins and a central longitudinal line pale obscure greyish; posterior lobe of pronotum and corium pale castaneous. Corium with a small spot near apex of clavus, apical angle and a transverse fascia near apex ochraceous. Scutellum castaneous, black at base. Membrane pale fuscous, with the basal half black, and with a curved ochraceous basal fascia. Legs ochraceous, apical halves of femora pale castaneous. Antennæ with the basal and apical joints fuscous, the last with the apex ochraceous; second and third joints ochraceous, third with the apical half fuscous. Head beneath and sternum black; body castaneous. The posterior lobe of the pronotum, base and lateral margin of the scutellum, and clavus coarsely punctate; the corium is longitudinally and submarginally punctured; and the anterior femora are unarmed.

Long. 9 millim.

Hab. Panama, Volcan de Chiriqui, 2500–4000 feet (*Champion*).

The unarmed femora render this species very distinct. One specimen only has been sent home by Mr. Champion.

HERÆUS.

Heræus, Stål, Stett. ent. Zeit. xxiii. p. 314, not. (1862); Hem. Afr. ii. p. 153 (1865); En. Hem. iv. p. 144 (1874).

Heræus differs from *Myodocha* in not having the long cylindrical neck; and the post-ocular and anteocular portions of the head are subequal in length. Its distribution, like that of the preceding genus, is apparently confined to the Nearctic and Neotropical Regions.

1. **Heræus eximius,** n. sp. (Tab. XVIII. fig. 21.)

Head, anterior lobe of pronotum, and scutellum black; posterior lobe of pronotum and legs chocolate-brown, the first darkly so. Clavus chocolate, with a longitudinal pale luteous streak extending about halfway from base. Corium pale luteous, with a subclaval streak on disk and about apical half, extending from

disk in a subcostal streak, chocolate-brown, with a large pale transverse whitish spot near apex, and the extreme apical angle a little paler. Membrane dark castaneous, veins somewhat paler towards base, and with an elongate ochraceous spot at apex. Antennæ with the first three joints ochraceous, third with the apex fuscous, fourth pale stramineous with the apex fuscous. Rostrum brown; apical joint ferruginous, with the tip fuscous. Intermediate and posterior femora with their basal third stramineous; tarsi ochraceous. Underside of body very dark chocolate-brown.

Long. 9–10 millim.

Hab. GUATEMALA, near the city, San Gerónimo, Capetillo, Las Mercedes (*Champion*).

Apparently allied to *H. cincticornis*, Stål, from which it differs by the absence of pale markings to posterior lobe of pronotum, different colour of the legs and antennæ, somewhat larger size, &c.

2. **Heræus percultus**, n. sp. (Tab. XIX. fig. 10.)

Head, pronotum, and scutellum black; the base of the posterior lobe of pronotum marked with four obscure ochraceous spots, two smallest and central, and one near each lateral angle much larger. Corium pale ochraceous, with a transverse fascia on disk which is widest anteriorly, and a large subquadrate spot at apical angle black. Membrane obscure hyaline, the veins pale ochraceous. Antennæ with the basal joint (excluding apex) and the apical joint fuscous; apex of first, and the second and third joints ochraceous. Anterior femora black, with their apices ochraceous; anterior tibiæ and intermediate and posterior legs pale ochraceous; apices of anterior tibiæ and an annulation near apices of intermediate and posterior femora fuscous. Body beneath black; rostrum with the basal joint brownish, second joint pale ochraceous (remainder mutilated). Anterior femora strongly spinous beneath; posterior lobe of pronotum very coarsely punctate and very slightly paler in hue than the anterior lobe. Clavus with three longitudinal series of punctures, two of which become somewhat fused towards apex. Corium sparsely punctate, the punctures in linear series.

Long. 4 millim.

Hab. GUATEMALA, near the city (*Champion*).

3. **Heræus guttata.** (Tab. XIX. fig. 11.)

Orthæa? guttata, Dall. List Hem. ii. p. 580. 2[1].

Hab. GUATEMALA, Zapote, Las Mercedes (*Champion*).—JAMAICA[1].

The Guatemalan specimens are of a more melanic pattern than the type specimen in the British Museum.

4. **Heræus illitus**, n. sp.

Closely allied to *H. guttata*, Dall., but differing in having the head more distinctly exserted and constricted at base, the postocular portion of the head being slightly longer than the anteocular, the anterior femora brown, and with their apices pale. Antennæ with the apical joint pale stramineous, the apical half fuscous.

Long. 6 millim.

Hab. GUATEMALA, San Juan (*Champion*); PANAMA, Volcan de Chiriqui, 2000–3000 feet (*Champion*).

PAMERA.

Pamera, p., Say, New Harm. Ind. Dec. 1831 ; Compl. Writ. i. p. 332 (1859).
Stenocoris, Ramb. Faun. And. p. 139 (1838).
Plociomerus, A. & S. Hist. des Hém. p. 255 (1843).
Orthæa, Dall. List Hem. ii. pp. 532 & 580 (1852).
Paromius, Fieb. Eur. Hem. pp. 45 & 170 (1861).
Gyndes, Stål, Stett. ent. Zeit. xxiii. p. 314, note (1862).
Diplonotus, Stål, Öfv. Vet.-Ak. Förh. 29 : 7, p. 51 (1872).

In this genus the head is not or but little exserted, the postocular portion of the head being shorter than the anteocular. The body is elongate, with the corium sparsely punctate; and the clavus is longitudinally punctate in linear series, but these series become more or less fused and irregular. The posterior margin of the pronotum is either truncate or slightly concave.

This genus is probably almost cosmopolitan.

1. **Pamera longula.** (Tab. XVII. fig. 26.)

Rhyparochromus longulus, Dall. List Hem. ii. p. 578. 50.
Paromius longulus (??), Stål, Stett. ent. Zeit. xxiii. p. 312. 213[1].
Pamera longula, Stål, En. Hem. iv. p. 148. 5[2]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 310. 1[3].

Hab. North America, Louisiana[3], Carolina[2], Texas[3], Florida[3].—Mexico[1 2 3], Orizaba (*Bilimek*[1], *Mus. Vind. Cæs.*); Guatemala, San Gerónimo (*Champion*); Panama, Volcan de Chiriqui, 2000–3000 feet (*Champion*).—Cuba[3] (*coll. Dist.*); Colombia, Bogota[2].

A Mexican specimen from the collection of Dr. Signoret is here figured. Some specimens, especially those from the northern limits, vary in having the femora ferruginous; and Stål[2] also observes that the fuscous apical margin to the corium is sometimes absent.

2. **Pamera parvula.** (Tab. XIX. fig. 12.)

Rhyparochromus parvulus, Dall. List Hem. ii. p. 576. 45[1].
Lygæus (*Plociomerus*) *amyoti*, Guér. in Sagra's Hist. de Cuba, Ins. p. 400[2].
Rhyparochromus (*Plociomerus*) *vinulus*, Stål, Freg. Eug. Resa, Ins. Hem. p. 246. 66[3]; Rio Hem. i. p. 40. 6[4].
Pamera parvulus, Stål, En. Hem. iv. p. 148. 8[5]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 310. 2[6].

Hab. North America[1], Carolina[5 6], Georgia[6], Texas[5 6], Florida[6].—Mexico[5 6] (*Bilimek*, *Mus. Vind. Cæs.*); British Honduras, Rio Hondo (*Blancaneaux*); Guatemala, Dueñas, Paraiso (*Champion*); Panama, Volcan de Chiriqui, 2000–3000 feet (*Champion*).

—Cuba [2 6]; Hayti [6]; Jamaica [1]; Colombia [5]; Ecuador, Puna [3], Guayaquil [3]; Brazil [5], Rio Janeiro [3 4 5]; Taiti [3].

A Guatemalan specimen is here figured, which differs in no respect from North-American and Antillean specimens which I have examined.

3. **Pamera vicinalis,** n. sp. (Tab. XIX. fig. 13.)

Head, anterior lobe of pronotum, and scutellum black, the apex of the last ochraceous; posterior lobe of pronotum dull obscure castaneous, with a central longitudinal raised carinate line, and with the lateral angles ferruginous. Corium pale ochraceous, clavus more or less fuscous near apex, a pale fuscous streak near centre of outer claval margin, a broad irregular black fascia on disk, widest interiorly, and a smaller one of the same colour situated just before apical angle, and extending along apical margin. In the posterior inner angle of the discal fascia is a rounded ochraceous spot. Membrane black, the apex broadly pale ochraceous, and narrowly ochraceous at apical angles of corium. Antennæ with the two basal joints ochraceous, third ochraceous with the apex fuscous, fourth fuscous with the base ochraceous. Legs ochraceous, the anterior femora, and apices of intermediate and posterior femora, brownish. Head beneath and sternum dark fuscous; acetabula and posterior margin of metasternum ochraceous; abdomen dull castaneous. The third joint of the antennæ is distinctly incrassated at apex, where it is as thick as the apical joint; the anterior femora are much thickened, and armed with a double series of somewhat widely separated spines.

Long. $5\frac{1}{2}$–6 millim.

Hab. Guatemala, Chiacam (*Champion*).

This species is allied to *P. crassicornis*, Stål, from which it differs by the smaller size, apical joint of the antennæ not wholly fuscous, and by the small pale spot in the discal fascia, which is not mentioned by Stål in his description. The two species are allied by the peculiarly thickened apex of the third joint of the antennæ.

4. **Pamera bilobata.** (Tab. XVII. fig. 25.)

Pamera bilobata, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 334. 7 [1].

Rhyparochromus scutellatus, Dall. List Hem. ii. p. 575. 43 [2].

Lygæus (*Plociomerus*) *Servillei,* Guér. in Sagra's Hist. de Cuba, Ins. p. 399 [3].

Rhyparochromus (*Plociomerus*) *ochroceras,* Stål, Freg. Eug. Resa, Ins. Hem. p. 245. 64 [4]; Rio Hem. i. p. 39. 2 [5].

Plociomera bilobata, Stål, Stett. ent. Zeit. xxiii. p. 312. 214 [6].

Plociomera servillei, Stål, Stett. ent. Zeit. xxiii. p. 312. 215 [6].

Pamera bilobata, Stål, En. Hem. iv. p. 150. 19 [7]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 310. 4 [8]; Berg, Hem. Argent. p. 108. 136 [9].

Hab. North America [1 2], Carolina [7 8], Louisiana [8], Georgia [8], Texas [7 8] (*Boll, Mus. Vind. Cæs.*), Florida [8].—Mexico [6 7 8] (*coll. Sign.*); Guatemala, San Gerónimo and near the city (*Champion*); Nicaragua, Chontales (*Janson*).—Cuba [8 3 5]; Colombia [7]; Ecuador, Puna [4]; Brazil [7], Rio Janeiro [4 7]; Argentine Republic [9]; Taiti [4].

The specimen figured is the identical Mexican specimen in the collection of Dr. Signoret,

which was originally identified by Stål[6] as *Plociomera servillei*, and which I have compared with the type of *Rhyparochromus scutellatus* in the British Museum. The species varies much in the extent of the transverse fascia to the corium, which is often broken and very indistinct as in the specimen here figured. The scutellum also is either fuscous or black.

5. **Pamera dallasi.** (Tab. XIX. fig. 14.)

Rhyparochromus lineatus, Dall. (nec Fabr.) List Hem. ii. p. 575. 41[1].

This species is closely allied to *P. bilobata*, but larger, and with the anterior lobe of the pronotum almost twice as long as the posterior.

Long. 5½–6½ millim.

Hab. North America[1].—Mexico (*Mus. Berol.*), Orizaba (*Bilimek, Mus. Vind. Cæs.*); Guatemala, San Gerónimo, Tamahu (*Champion*).

From an examination of the type, I have satisfied myself that this is the species identified by Mr. Dallas as the *Lygæus lineatus*, Fabr. The Fabrician species, however, belongs to the Capsidæ, as pointed out by Stål, and is placed in the genus *Lygus* by Prof. Uhler.

6. **Pamera vivida,** n. sp. (Tab. XIX. fig. 15.)

Head pitchy, very thickly covered with greyish pubescence. Pronotum castaneous, with the posterior angles black. Scutellum black. Corium pale ochraceous, with some darker shadings on disk, and with the apical angles pitchy. Membrane pale ochraceous, with the apical half much suffused with brown, and with a few indistinct central pitchy spots. Abdomen beneath reddish with the apex black; sternum black; antennæ and legs ochraceous; the tarsi somewhat pitchy. The anterior lobe of the pronotum is about half as broad again as the posterior lobe, both being clothed with a few long hairs on each side, and the posterior having a few scattered punctures; the scutellum has also a few scattered punctures near apex. Clavus punctured in longitudinal series, and a submarginal series of closely placed punctures from base to about centre of lateral margin of corium. Anterior femora very strongly incrassated, with some small but closely arranged spines on undersides of their apical halves.

Long. 7 millim.

Hab. Guatemala, San Gerónimo (*Champion*).

7. **Pamera globiceps.** (Tab. XIX. fig. 16.)

Pamera globiceps, Stål, En. Hem. iv. p. 150. 20[1].

Hab. Guatemala, Senahu, El Tumbador, Las Mercedes, Tamahu, Volcan de Atitlan, San Isidro (*Champion*); Panama, Volcan de Chiriqui, 2000–3000 feet (*Champion*).—Colombia, Bogota[1].

A Guatemalan specimen is figured, which agrees thoroughly with Stål's description. Although I have been able to examine a long series of specimens, little variation is observable, and the species appears to be of a constant character.

PSEUDOPAMERA, n. gen.

Head large, prominently exserted, the anteocular portion about twice the length of the postocular; basal joint of antennæ long, passing apex of head by more than half its length. Pronotum with the anterior lobe twice the length of posterior lobe, collar at anterior margin distinct. Anterior femora incrassated and very strongly spined; anterior tibiæ inwardly armed with a very strong spine. Scutellum with a central carinate line. Other characters as in *Pamera*.

1. **Pseudopamera aurivilliana.** (Tab. XX. fig. 8.)

Head pitchy castaneous; eyes black; antennæ with the first, second, and third joints castaneous. Apex of the third joint a little infuscated; apical joint fuscous, with about basal third ochraceous; second and third joints longest and subequal, fourth a little longer than first. Pronotum with the anterior lobe globose and dark shiny castaneous, the posterior lobe reddish ochraceous, and coarsely but sparingly punctate. Scutellum dark castaneous, the base and lateral margins very coarsely punctate, the last very narrowly ochraceous. Corium ochraceous; clavus, a discal longitudinal streak near base, a very broad transverse fascia enclosing a small ochraceous spot near its inner posterior angle, and a large subtriangular apical spot reddish ochraceous. The clavus is coarsely and longitudinally punctate, the corium sparingly punctate. Membrane fuscous, the base and an apical spot pale and subhyaline. Body beneath and legs reddish ochraceous; head beneath and sternum shiny castaneous; posterior angles of metasternum and tarsi ochraceous, the last with their apical joints fuscous. Rostrum reddish ochraceous and reaching anterior coxæ.

Long. 9 millim.

Hab. MEXICO, Tehuantepec (*Mus. Holm.*).

The lateral margins of the anterior lobe of the pronotum and the anterior femora are strongly setose; the lateral angles of the posterior pronotal lobe are subprominent, subnodose, and rounded; the anterior femora are armed beneath with strong spines, of which about five are very prominent; the anterior tibiæ are inwardly armed with a very strong spine a little before the middle.

PLOCIOMERA.

Pamera, subg. *Ptochiomera*, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 335 (1859).
Plociomera, Stål, En. Hem. iv. p. 144 (1874).

This genus differs from *Pamera* in having the body less elongate, the corium more strongly punctate, and the clavus longitudinally punctate in three linear series; the scutellum has a central, longitudinal, carinate line.

The genus, as thus restricted by Stål, appears to be quite confined to the Nearctic and Neotropical Regions.

1. **Plociomera oblonga.** (Tab. XVII. fig. 24.)

Plociomera oblonga, Stål, Stett. ent. Zeit. xxiii. p. 313. 218[1]; En. Hem. iv. p. 153. 5[2].

Hab. MEXICO[1,2]; GUATEMALA, Paraiso (*Champion*); PANAMA, Volcan de Chiriqui, 2000–3000 feet (*Champion*), Matachin (*Dr. Thieme, coll. Oberthür*).

The type, in the collection of the Stockholm Museum, is here figured.

2. **Plociomera formosa,** n. sp. (Tab. XIX. fig. 25.)

Head and anterior lobe of pronotum blackish, somewhat thickly and ochraceously pilose; posterior lobe of pronotum pale castaneous, the lateral margins ochraceous, and with an obscure dark submarginal spot near each humeral angle; antennæ with the basal joint castaneous, second and third joints pale brownish, apical joint black, second joint longest, third shortest. Scutellum with the base blackish, the apical half, including central carinate line, castaneous; the apex luteous; clavus pale castaneous; the apical suture luteous. Corium castaneous, basal costal margin, followed by a subtriangular basal spot about centre, a subquadrate marginal spot near apex, and extreme apex luteous; the castaneous coloration is tinged with piceous, and forms two more or less well-defined transverse fasciæ, one central and broad, the other subapical and narrower; membrane pale brownish, with a small luteous spot near angle of corium. Anterior femora castaneous, with their apices luteous; intermediate and posterior femora luteous, with a large castaneous annulation near apex; tibiæ luteous, annulated with castaneous at base, and with the apex also castaneous; tarsi luteous, with their apices more or less castaneous. The posterior lobe of the pronotum and remaining upper surface is more sparingly pilose than the head and anterior pronotal lobe, the last of which is wider but considerably narrower than the posterior lobe, which is coarsely punctate. The anterior femora are armed beneath with a few very distinct spines near apex.

Long. 4 millim.

Hab. GUATEMALA, San Gerónimo, Quezaltenango, Quiche Mountains, and near the city (*Champion*).

This species is allied to both *P. minima*, Guér. (from the description and size of which it seems very distinct), and *P. oblonga*, Stål, the previous species here enumerated and figured.

3. **Plociomera cæca,** n. sp. (Tab. XIX. fig. 24.)

Head, anterior lobe of pronotum, and scutellum piceous; posterior lobe of pronotum and corium dull obscure ochraceous, thickly covered with dark punctures. Antennæ with the basal joint piceous, the remaining joints dull obscure ochraceous; the second joint longest, and third shortest. Head obscurely punctate and pilose. Anterior lobe of pronotum obscurely punctate and pilose, the anterior margin distinctly dull ochraceous, the lateral margins obscurely dull ochraceous, wider, and a little narrower than posterior lobe, which is coarsely punctate, and which possesses five obscure longitudinal dark fasciæ, three discal and one at each margin. Apex of scutellum luteous. Corium with the basal half of costal margin, a subapical marginal spot, and basal claval margin paler ochraceous. Membrane dull brownish or piceous, and much abbreviated and truncate. Femora piceous, with their apices ochraceous; tibiæ dull ochraceous, with their extreme apices piceous; tarsi dull ochraceous, with their extreme apices piceous. Anterior femora armed beneath with a few stout spines near apex.

Long. $2\frac{1}{2}$–$3\frac{1}{2}$ millim.

Hab. GUATEMALA, Quiche Mountains (*Champion*).

This species varies much in size, and is apparently most closely allied to *P. tumens*, Stål, from which it differs by the different colour of the antennæ, colour and markings of corium, &c. The colour of the antennæ is also variable, in some species being altogether piceous. The species is also inconstant in amount of melanism.

CHOLULA, n. gen.

Body elongate; pronotum large and subglobose, with the transverse constriction profound, the anterior lobe a little shorter and narrower than posterior lobe; basal margin concave at base of scutellum; the lateral angles rounded, slightly ampliated and posteriorly produced. Head but little exserted, as in the two preceding genera. Scutellum with a central carinate line as in *Plociomera*, but differing from that genus by the less punctate corium, and in having the clavus more or less punctured, as in *Pamera*.

1. **Cholula variegata,** n. sp. (Tab. XIX. fig. 17.)

Head pale fuscous, sparingly pilose; antennæ with the basal joint luteous, second and third joints dull ochraceous; apical joint fuscous, with its base ochraceous; second joint longest, first and third subequal in length. Anterior lobe of pronotum pale fuscous, its anterior margin ochraceous; posterior lobe very pale castaneous, coarsely punctate, the lateral margins and discal base pale ochraceous. Scutellum very coarsely punctate and pale castaneous, with its apex ochraceous. Corium pale ochraceous, sparingly but coarsely punctate, with a fuscous spot near claval apex, followed by a somewhat broken fuscous fascia and a large fuscous subapical spot. Membrane pale fuscous. Connexivum luteous, with subquadrate pale castaneous spots. Legs pale ochraceous; anterior femora and apices of intermediate and posterior femora darker ochraceous. Body beneath with the sternum dull dark castaneous; the posterior margins of the pro-, meso-, and metasternum dull ochraceous. Abdomen pale castaneous, with the lateral margin spotted with luteous. Anterior femora armed beneath with a few spines.

Long. 4½ millim.

Hab. GUATEMALA, Torola (*Champion*).

Only one specimen of this species has been received from Mr. Champion.

2. **Cholula bicolor,** n. sp. (Tab. XIX. fig. 18.)

Head, pronotum, and scutellum black and obscurely punctate. Antennæ pale ochraceous, the apical joint somewhat darker; basal joint shortest, second longest, and third and fourth subequal in length. Margins of pronotal angles pale ochraceous. Corium pale ochraceous, with scattered and darker punctures; costal margins and a space near inner apical angle impunctate. Membrane pale hyaline, but reflecting the dark colour of the upperside of abdomen. Legs pale ochraceous. Body beneath piceous; posterior angles of pro- and metasternum and acetabula ochraceous. Anterior femora armed beneath with a few strong spines.

Long. 4 millim.

Hab. GUATEMALA, Zapote (*Champion*).

We have received two specimens of this species from Mr. Champion, both of which are constant in markings.

PEPHYSENA, n. gen.

Anterior lobe of the pronotum globose, and twice as long as the posterior. Head globose, strongly exserted, and placed at the end of an elongated cylindrical neck, *the length of which is variable*; basal joint of antennæ reaching or passing the apex of the head. Anterior femora strongly incrassated and spined beneath; anterior tibiæ curved and unarmed.

This genus differs from all the preceding genera here enumerated (with the exception of *Pseudopamera*) by the greater length of the anterior lobe of the pronotum. It is most closely allied to *Erlacda*, Sign., a genus, according to present knowledge, confined to Chili, from which it differs by the unarmed anterior tibiæ, and the anterior lobe of the pronotum being only twice, not three times, as long as the posterior.

1. **Pephysena levis,** n. sp. (Tab. XVIII. figg. 24 & 25.)

Head and anterior lobe of pronotum black, posterior lobe of pronotum chocolate-brown. Antennæ with the first three joints ochraceous, extreme apices of second and third and the apical joint fuscous; second joint longest, third and fourth a little shorter than second and subequal in length. Scutellum black, with the apex ochraceous. Corium ochraceous, with numerous and confluent castaneous markings, which more or less regularly compose a claval and a subclaval fascia and two transverse fasciæ, one near apex of

scutellum, and the other near base of membrane (the first of these transverse fasciæ, however, is in many specimens practically obsolete), and a broad black apical margin. Membrane pale fuscous hyaline, the basal half fuscous, with the basal margins pale, the apical half more or less streaked with fuscous. Femora pale castaneous, with their bases more or less ochraceous; tibiæ dull deep ochraceous; tarsi ochraceous, with their apices fuscous. Body beneath with the head and sternum piceous, the abdomen dull deep castaneous; intermediate and posterior coxæ, dull ochraceous.

Long. 6–7 millim.

Hab. GUATEMALA, Tamahu, Senahu (*Champion*).

The variability of this species is of the most extraordinary character, as it affects such a good structural character as the length of the neck. This is most inconstant in the specimens now before me, extreme forms of which are here figured, but between them all intermediate varieties exist. When we reflect that this character has been greatly used in differentiating species of *Myodocha* (doubts as to the value of which were expressed, *antè*, p. 203), the opinion becomes stronger that not infrequently in the Heteroptera a multiplicity of specimens is in an inverse ratio to a plethora of species.

The anterior lobe of the pronotum is very globose, and as broad as long.

2. **Pephysena insignis,** n. sp. (Tab. XX. fig. 9.)

Head and anterior lobe of pronotum shiny black; antennæ pale castaneous, base of the first joint white, second and fourth joints longest and subequal in length. Posterior lobe of pronotum pale castaneous, coarsely punctate, clothed with pale creamy pubescence in front. Scutellum black. Clavus black, the outer basal margin creamy. Corium ochraceous, with a broad transverse central fascia and a subtriangular apical fascia black; between these black fasciæ the colour is creamy and somewhat iridescent; the extreme apical margin is ochraceous, and the costal margin, as far as the central black fascia, pale stramineous. Membrane fuscous, the basal margin faintly ochraceous, and with a central longitudinal pale greenish line on apical half. Body beneath black, the abdomen castaneous; posterior angles of pro- and meta-sternum castaneous, lateral margins of abdomen ochraceous; coxæ and legs ochraceous, the posterior legs darkest, the bases of the fore and intermediate femora and the intermediate tibiæ being very pale.

Long. 7 millim.

Hab. PANAMA, Bugaba (*Champion*).

The anterior lobe of the pronotum is much longer than broad, a character which, in addition to the colour and markings, will at once serve to distinguish this species from *P. levis*. The corium is sparingly punctate, and the anterior femora strongly spinous beneath.

Division **RHYPAROCHROMARIA.**

Rhyparochromaria, Stål, Öfv. Vet.-Ak. Förh. 29: 7, p. 51 (1872); En. Hem. iv. p. 142 (1874).
Beosaria, Stål, Öfv. Vet.-Ak. Förh. 29: 7, p. 54 (1872); En. Hem. iv. pp. 142–3 (1874).
Gonianotaria, Stål, Öfv. Vet.-Ak. Förh. 29: 7, p. 58 (1872).
Lethæaria Stål, Öfv. Vet.-Ak. Förh. 29: 7, p. 59 (1872); En. Hem. iv. p. 143 (1874).
Drymaria, Stål, Öfv. Vet.-Ak. Förh. 29: 7, p. 59 (1872).

I have felt compelled to combine the above divisions proposed by Stål, as, with every wish to follow that author as I have hitherto done with great advantage to my know-

ledge of the Order, I have here failed to interpret his meaning sufficiently to prevent confusion.

As defined by Stål, the "Rhyparochromaria," in his restricted sense, is separable from the preceding division here enumerated by the absence of the distinct collar at the anterior margin of the pronotum, of which the lateral margins are generally more or less carinate, but not ampliated. The "Beosaria" are distinguished by these lateral pronotal margins being more or less laminated and ampliated, and having the antennæ nude, or sometimes slightly pubescent, which in the "Gonianotaria" have the three basal joints rigidly hirsute or setose. The "Lethæaria," with which Stål himself incorporated his division "Drymaria," are stated by him to be differentiated from all the preceding divisions by the following character:—"Lateribus segmenti quarti ventralis maculis opacis duabus, a margine postico segmenti longe remotis, interdum quoque posterius macula opaca tertia instructis." After a prolonged study with all these divisions, and especially with the last-named, I have found Central-American forms which did not rigidly appertain, so that it was possible, by wrong divisional differentiation, to add confusion to the study of the whole group. I have, however, without using these divisional names, endeavoured to group the species in accordance with Stål's views, not so much (in my opinion) for their special classificatory value, but rather for the aid thus afforded to the study of faunistic affinities and distribution, as Stål has in this way enumerated the different extra-European species with which he was acquainted.

NEOCATTARUS, n. gen.

Head, including outer margin of eyes, a little broader than anterior margin of pronotum. Eyes prominent. Ocelli situate at base of head, and separated from each other by about twice the distance that separates them from the eyes. Antennæ with the basal joint more or less passing the apex of the head, second joint about or a little more than twice the length of the first. Rostrum about reaching intermediate coxæ, first joint subequal in length to that of head. Pronotum strongly and transversely constricted, the anterior lobe narrower but a little longer than posterior lobe. Costal margin of corium concavely sinuated. Anterior femora incrassated and spined beneath.

This genus appears to be allied to *Cattarus*, Stål, and *Pamphantus*, Stål, from both of which it differs by the length of the second joint of the antennæ and of the first joint of the rostrum, and the relative proportions of the pronotal lobes. From *Cattarus* it also differs by the position of the ocelli, and from *Pamphantus* by the sinuated costal margin of the corium.

1. **Neocattarus firmus**, n. sp. (Tab. XIX. fig. 19.)

Head and pronotum dull opaque black; posterior lobe of pronotum somewhat paler, and with the lateral and basal margins narrowly dull ochraceous; head and anterior lobe of pronotum indistinctly rugulose, posterior pronotal lobe sparingly but distinctly punctate. Antennæ ochraceous, the apical joint somewhat infuscated; second joint longest, third and fourth a little shorter than second, and subequal in length. Scutellum dull opaque black, the disk gibbous and sparingly punctate; apical half, excepting central carinate line, very coarsely and thickly punctate. Clavus piceous, with a large black apical spot. Corium

ochraceous, with a large, irregular, transverse black fascia, which is widest at inner angle, where it contains a small ochraceous spot, and a broad, black apical marginal fascia, which becomes suddenly attenuated as it approaches the central fascia. Membrane pale fuscous hyaline. Body beneath piceous, posterior angles of metasternum pale ochraceous; legs dull obscure ochraceous, intermediate and posterior femora more or less castaneous, apices of tarsi pitchy.

Long. 4 millim.

Hab. PANAMA, Caldera (*Champion*).

One specimen only of this species has been received from Mr. Champion.

2. **Neocattarus vegetus,** n. sp. (Tab. XIX. fig. 20.)

Head and pronotum dull opaque black; head and anterior lobe of pronotum obscurely rugulose, posterior pronotal lobe faintly but distinctly punctate; antennæ pale castaneous, apices of second and third joints dark castaneous; apical joint fuscous, with the base castaneous; basal joint shortest, second and fourth subequal in length. Scutellum black, with the apex pale luteous. Clavus black, with the central portion ochraceous. Corium ochraceous, with two transverse black fasciæ, the first near centre of clavus, the second and broadest crossing corium at its inner angle, and there possessing a small ochraceous spot; and the apical margin broadly black, becoming attenuated towards inner angle. Membrane fuscous, with the base somewhat paler. Body beneath piceous, anterior lateral margins and posterior angles of metasternum pale ochraceous. Femora piceous, apices dull ochraceous; tibiæ piceous, with their extreme bases dull ochraceous; tarsi ochraceous, with their apices pitchy.

Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

This species is allied to *N. firmus*, from which it differs by the very different relative lengths of the antennal joints, the different colour of the posterior lobe of the pronotum, &c.

3. **Neocattarus vigens,** n. sp. (Tab. XIX. figg. 21 & 22.)

Head and anterior lobe of pronotum black; posterior pronotal lobe castaneous, with its anterior lateral margins sometimes ochraceous. Antennæ with the first three joints ochraceous and their apices stramineous, apical joint fuscous; the second joint subequal in length or a little longer than fourth, third a little shorter than fourth. Scutellum dark fuscous. Clavus castaneous. Corium ochraceous, with a few coarse scattered dark punctures; the claval and apical margins castaneous, broadest at inner and apical angles, with a whitish spot near inner angle; two oblong fuscous costal spots, one near base and the other about centre. Membrane fuscous, with the basal angle and apical margin very much paler. Anterior femora castaneous, with their apices ochraceous; anterior tibiæ and tarsi and intermediate and posterior legs ochraceous, the intermediate and posterior femora broadly annulated with castaneous near their apices. Body beneath with the head and sternum piceous, the abdomen castaneous, posterior angles of metasternum pale ochraceous.

The head and anterior lobe of the pronotum are obscurely rugulose, the posterior pronotal lobe distinctly and somewhat thickly punctate; scutellum with a few scattered coarse punctures, the clavus coarsely punctate in linear series.

Long. $3\frac{1}{2}$–4 millim.

Hab. GUATEMALA, San Gerónimo, Panima, Chiacaman, Cerro Zunil (*Champion*); PANAMA, Bugaba (*Champion*).

This species varies in size and hue, as the two figures here given sufficiently portray.

4. **Neocattarus parvus,** n. sp. (Tab. XX. fig. 1.)

Head, pronotum, and scutellum piceous; antennæ with the first three joints ochraceous, apex of second and base of third joints castaneous, apical joint piceous; first and third and second and fourth joints subequal in length. Anterior margin of pronotum narrowly obscure ochraceous. Clavus castaneous, with a fuscous spot a little beyond centre. Corium ochraceous, with a few scattered dark punctures, apical and posterior portion of inner margin broadly piceous, with a whitish spot near inner angle; two fuscous costal spots, one near base and the other (largest) about centre. Membrane fuscous, the margins pale hyaline. Body beneath fuscous, posterior angles of metasternum pale ochraceous. Coxæ and anterior femora piceous, the last with their apices pale ochraceous; anterior tibiæ and tarsi and intermediate and posterior legs ochraceous, the last with the femora annulated with castaneous near apices, the bases of tibiæ also castaneous.
Long. 3 millim.

Hab. GUATEMALA, Volcan de Atitlan (*Champion*).

The small size, markings of corium, and relative length of the antennal joints sufficiently distinguish this species.

5. **Neocattarus gracilis,** n. sp. (Tab. XX. fig. 2.)

Head, anterior lobe of pronotum, and scutellum black; posterior lobe of pronotum dull, dark, obscure castaneous, with the lateral angles narrowly ochraceous. Antennæ with the first, second, and third joints ochraceous, the fourth fuscous with the base ochraceous; the second joint subequal to or a little longer than fourth, third longer than first. Clavus fuscous, with a black spot on each side near apex. Corium ochraceous, with an oblique fuscous spot near base, a transverse fascia near inner angle, and a very broad apical margin dark castaneous, with a pale spot near inner angle, and a smaller and more obscure one a little below it near apical margin, and a fuscous subclaval streak. Membrane pale hyaline, with greenish reflections, the base fuscous. Body beneath piceous; posterior angle of metasternum ochraceous; four spots at base of mesosternum, one linear near each lateral margin, and two rounded on disk, two at base of metasternum, and a large transverse discal fascia occupying nearly the whole of second abdominal segment, and extending to disk of third segment, pale, silvery, pubescent. Legs ochraceous; anterior femora, excepting apices, apical halves of posterior femora, and the posterior tibiæ dark castaneous or piceous, apical halves of intermediate femora pale castaneous.

Head and anterior lobe of pronotum obscurely rugulose, posterior pronotal lobe distinctly punctate; scutellum with a few distinct coarse punctures; clavus and subclaval area longitudinally punctate; corium with a few scattered punctures.
Long. $3\frac{1}{2}$ to 4 millim.

Hab. GUATEMALA, San Isidro, Pantaleon (*Champion*).

RHYPAROCHROMUS.

Rhyparochromus, Curtis, Brit. Ent. xiii. p. 612 (1836); Stål, Öfv. Vet.-Ak. Förh. 29: 7, p. 52 (1872).

Megalonotus, Fieb. Eur. Hem. pp. 47 & 181 (1861).

In this genus the anterior lobe of the pronotum is much longer than the posterior, and has the lateral margins strongly rounded, the second and third joints of the rostrum are subequal in length, and the anterior femora are incrassated and have a distinct subbasal spine.

This is a Palæarctic genus, of which *Pamera una,* Say (identified as a *Megalonotus* by Mr. Uhler), is a North-American representative.

1. **Rhyparochromus plenus,** n. sp. (Tab. XIX. fig. 23.)

Head and pronotum bronzy black, the last coarsely punctate, but more prominently so on the posterior lobe; scutellum bronzy black, and, excluding a central carinate line, very coarsely punctate. Corium dull ochraceous, the clavus much suffused with pale piceous, a pale piceous subcostal fascia (ill-defined) not reaching base and terminating about centre, where it amalgamates with a large bright black patch, which occupies apical half of corium. Membrane pale hyaline, very much abbreviated, and not reaching apex of abdomen. Antennæ pilose, pale piceous, basal joint, excepting apex, and basal portion of second joint much darker; second joint subequal or a little longer than fourth; the third joint longer than first, but shorter than second or fourth. Body beneath bronzy black, lateral margins of meso- and metasternum ochraceous; legs black; apices of femora, apical portions of tibiæ, and tarsi dark ochraceous.

Long. 3 millim.

Hab. GUATEMALA, Quezaltenango (*Champion*).

The very different markings and coloration will alone distinguish this species from *R. una*, the only other recorded American representative of the genus.

TRAPEZONOTUS.

Trapezonotus, Fieber, Eur. Hem. pp. 50 & 190 (1861); Stål, Öfv. Vet.-Ak. Förh. 29: 7, p. 55 (1872); En. Hem. iv. p. 158 (1874).

In this genus the principal characters to be relied on, especially with reference to allied American genera, are the shape of the head and pronotum, both of which are transversely broad and not longer than broad. The basal joint of the antennæ also only just passes the apex of the head.

This is another Palæarctic genus, being well represented in Europe, where ten species are enumerated by Dr. Puton. One of these is also recorded by both Mr. Uhler and the late Dr. Stål as found in North America; and a second American species has been described from Texas. Neither of these has yet been received from Central America, from which, however, I am able to describe the following new species:—

1. **Trapezonotus caliginosus,** n. sp. (Tab. XX. fig. 3.)

Head black, pilose. Pronotum with the anterior lobe black, subrugulose, and finely punctate, the posterior lobe ochraceous, coarsely and, in some places, confluently punctured with black; the margins ochraceous and impunctate. Scutellum piceous, very finely and sparingly punctate, the apical margins more distinctly and coarsely punctate. Corium ochraceous, coarsely and, in some places, confluently punctured with black; the lateral margins impunctate. Membrane pale fuscous, the margins and veins ochraceous. Antennæ pale brown, the apical joint darkest; first, second, and third joints pilose; second joint longest, fourth joint a little longer than third. Body beneath piceous, lateral margins of sternum and acetabula ochraceous; legs variable in coloration, in some specimens almost uniformly ochraceous, in others with the anterior femora (excepting apices) and broad apical annulations to intermediate and posterior femora more or less castaneous.

Long. 4 to 5 millim.

Hab. GUATEMALA, Quezaltenango, Quiche Mountains (*Champion*); PANAMA, Volcan de Chiriqui, 4000–6000 feet (*Champion*).

In this genus considerable allowance must be made for the amount of ampliation of

the lateral margins of the pronotum, a character which varies in extent among the European species, and which is particularly minimized in the Texan species *T. rufipes*, Stål. In *T. caliginosus* the extent of this ampliation may be described as of a somewhat intermediate character.

TRAPEZUS, n. gen.

The characters of this genus are in the main those of *Trapezonotus*; but differential ones are found in the length of the head, which equals, or is a little longer than, the width; the head, including outer margin of eyes, is distinctly narrower than the anterior margin of the pronotum; the anterior femora are thickened, but not spined; and the colour is shining, not opaque.

1. **Trapezus trimaculatus,** n. sp. (Tab. XX. fig. 4.)

Head piceous, apex ochraceous; eyes dull brownish. Antennæ sparingly pilose, with the first and second joints ochraceous, the third and fourth piceous; second and fourth joints subequal in length, third joint a little longer than basal, which slightly passes the apex of head. Pronotum with the anterior lobe black, with a few scattered punctures; posterior lobe ochraceous, with fuscous suffusions, and sparingly but distinctly punctate, the margins ochraceous and impunctate. Scutellum black, very finely but sparingly punctate, with three linear ochraceous spots, one at apex and two lateral about centre. Corium ochraceous, coarsely and darkly punctate, the punctures arranged in linear series, between which the ground-colour appears as pale ochraceous fasciæ, of which there are two claval, two subclaval, and two discal, between which near apical margin, which is also pale ochraceous, are two elongated and irregular pale ochraceous spots; lateral margin also pale ochraceous. Membrane pale fuscous, the apical margin pale hyaline, the base somewhat ochraceous. Body beneath piceous; posterior angles of pro- and metasternum ochraceous, lateral margins of sternum narrowly dull ochraceous. Legs ochraceous.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city (*Champion*).

2. **Trapezus apicatus,** n. sp.

Closely allied to the preceding species; but scutellum with the apex only ochraceous, and antennæ with the second joint distinctly longest, and third and fourth joints subequal in length; the third joint has only the apex piceous.

Long. $3\frac{1}{2}$ millim.

Hab. MEXICO, Cornuvacca (*Bilimek, Mus. Vind. Cæs.*); GUATEMALA, San Gerónimo, Quezaltenango, Cerro Zunil, near the city (*Champion*).

3. **Trapezus fasciatus,** n. sp. (Tab. XX. fig. 5.)

Allied to *T. apicatus*, but larger; antennæ longer, but with the same relative length of joints; pronotum more narrowed anteriorly and more concave at base. Corium with a short subclaval fuscous fascia, a wide transverse black fascia crossing at inner angle, and apical margin and angle also widely black.

Long. 4 millim.

Hab. GUATEMALA, San Isidro, Pantaleon (*Champion*); PANAMA, Volcan de Chiriqui, 2000–3000 feet, Bugaba (*Champion*).

GONIANOTUS.

Gonianotus, Fieber, Eur. Hem. pp. 51 & 196 (1861); Stål, Öfv. Vet.-Ak. Förh. 29: 7, p. 59 (1872).

Gonianotus has been differentiated from *Emblethis*, an allied European genus found in America, and both of which belong to Stål's division *Ganianotaria* (*ante*, pp. 212 & 213), in the following manner by Stål:—"Spatio inter antennas et oculos longiore, antrorsum haud angustato; tuberculis antenniferis latioribus, apice late truncatis, angulo apicali ultra locum insertionis antennarum prominulo."

Dr. Puton has enumerated two European species of this genus, one of which is also recorded in North America, and has been received by us from Guatemala.

1. **Gonianotus marginepunctatus.**

Lygæus marginepunctatus, Wolff, Ic. Cim. 150, t. 15. fig. 144[1].

Lygæus pilifrons, Zett. Act. Holm. 1819, 71; Fall. Hem. Suec. 52. 8.

Pachymerus marginepunctatus, Schill. Beitr. i. 71. 11, t. 6. fig. 8; Hahn, Wanz. Ins. i. p. 52, t. 8. fig. 32; H.-S. Nom. Ent. i. pp. 45 & 79.

Rhyparochromus marginepunctatus, Dall. List Hem. ii. p. 563. n. 10[2].

Gonianotus marginepunctatus, Fieb. Eur. Hem. p. 197. 1; Uhler, Proc. Bost. Soc. Nat. Hist. xix. p. 392[3]; Dist. Scient. Res. Sec. Yarkand Miss., Rynch. p. 9. n. 28 (1879)[4].

Hab. North America, Massachusetts[3].—Guatemala, Ostuncalco, 7500 feet (*Champion*).—Europe[1 2]; Madeira[2]; Africa[2], Algeria (*Lucas*). Asia, Yarkand[4].

Mr. Uhler[3] remarks on this species, as found in North America, that it "is probably an importation from Europe, as it offers no difference from specimens which I have examined from Germany. Several of the varieties found in Europe are also to be met with in this country." In two specimens, received from Guatemala, I can detect neither specific difference nor special variation.

EREMOCORIS.

Eremocoris, Fieber, Eur. Hem. pp. 49 & 187 (1851); Stål, Öfv. Vet-Ak. Förh. 29: 7, p. 60 (1872); En. Hem. iv. p. 163 (1874).

The body is opaque; the first joint of the antennæ passes the apex of the head by more than its apical half; the posterior lobe of the pronotum is distinctly anteriorly depressed, and is likewise shorter than the anterior lobe. These are some of the principal characteristics of this genus, whose area is a very wide one. Dr. Puton enumerates four European species; one and, at present, one only is known in the Nearctic Region, whilst we have received the following undescribed species from Guatemala.

1. **Eremocoris tropicus,** n. sp. (Tab. XX. fig. 7.)

Head piceous; antennæ piceous, the base of the first joint luteous; second, third, and fourth joints subequal in length. Pronotum castaneous, with the lateral margins, excepting base, ochraceous; the anterior lobe

finely and indistinctly punctate; the posterior lobe distinctly and more coarsely punctate, with two large, central, piceous spots, and a smaller one at each basal margin, and with a central, pale, longitudinal, ochraceous line. Scutellum piceous, finely and indistinctly punctate. Clavus dull testaceous, with the central portion ochraceous. Corium dull testaceous; the basal third and a large central spot a little before apex ochraceous; there is also an obscure and somewhat pale spot on each side of disk near claval margin. Membrane pale fuscous, the veins darker, the basal margin piceous, and the apex and basal angles near apices of corium ochraceous. Body beneath piceous; lateral margins of sternum and posterior margin of metasternum ochraceous; anterior femora piceous, with their apices ochraceous; intermediate and posterior femora ochraceous, broadly annulated with fuscous near their apices; tibiæ and tarsi ochraceous.

Long. 4 millim.

Hab. GUATEMALA, Quiche Mountains (*Champion*).

This species is closely allied to *E. ferus*, Say, of which the *Rhyp. borealis*, Dall., is stated by Uhler and Stål to be a synonym. From this it differs by the different colour of the legs, marking of the membrane, &c.

GONATAS, n. gen.

Antennæ with the three basal joints hirsute, first joint passing apex of head, second longest, attenuated at its base. Head rather longer than broad and, including outer margin of eyes, a little narrower than interior margin of pronotum. Pronotum broader than long, the anterior margin narrower than basal, the lateral margins moderately ampliated; the anterior angles rounded, and with an obscure central transverse impression; the posterior margin slightly concave at base of scutellum. Scutellum triangular, a very little longer than broad. Anterior femora moderately thickened, somewhat setose beneath, and with a few very small spines beneath near apex; intermediate and posterior tibiæ setose; first joint of posterior tarsi almost twice as long as second and third joints together. Rostrum reaching intermediate coxæ; first joint about equal in length to that of the head; second longest, reaching anterior coxæ. Abdomen beneath pilose.

1. **Gonatas typicus,** n. sp. (Tab. XX. fig. 6.)

Head black. Antennæ pale piceous; apices of first and second joints, third joint excepting base, and fourth joint dark piceous; second joint longest, third and fourth subequal in length. Pronotum piceous; lateral margins, excepting base, ochraceous; anterior half with the frontal margin coarsely punctate, the disk shining and impunctate, posterior half and inner lateral margins thickly and coarsely punctate. Scutellum black, coarsely punctate, with a central, longitudinal carinate line, and with two raised impunctate submarginal nodosities on each side, and a similar one near apex. Corium ochraceous, much suffused with piceous, sparingly punctate; basal costal margin ochraceous and impunctate. Membrane pale fuscous. Body beneath piceous; femora piceous, with their apices ochraceous; tibiæ ochraceous, with their apices pitchy; tarsi ochraceous, their apical joints more or less pitchy. Intermediate and posterior tibiæ strongly setose.

Long. 4½ millim.

? Why? Caldera appears in several places in Guatemala - R.C.F.

Hab. ~~GUATEMALA~~ Panama?, Caldera (*Champion*); PANAMA, Volcan de Chiriqui 2000–3000 feet, Bugaba (*Champion*).

2. **Gonatas divergens,** n. sp. (Tab. XX. fig. 10.)

Head shining black; pronotum black, opaque, with the lateral angles ochraceous (in some specimens the basal margin and also the posterior portion of the lateral margins are obscure ochraceous). Antennæ pale castaneous, with the apical joint darker, piceous or sometimes concolorous; second joint very slightly longer than third and fourth, which are subequal in length. Scutellum black, opaque. Clavus ochraceous,

coarsely and darkly punctate, with a pale ochraceous levigate line on each side, parallel with the apical half of scutellum. Corium black, with the veins, base, and claval margins ochraceous; the costal margin and a large irregular subapical spot pale luteous. Membrane fuscous, with the base and veins paler. Body beneath shiny black; coxæ and femora dark castaneous; rostrum, tibiæ, and tarsi pale ochraceous.

The rostrum reaches the intermediate coxæ; the abdomen is pale ochraceously pilose; the tibiæ are strongly setose; and the pronotum has the base very slightly concave.

Long. $4\frac{1}{2}$–5 millim.

Hab. GUATEMALA, San Gerónimo, Paraiso, Chiacam (*Champion*); PANAMA, Bugaba (*Champion*).

I include this species in the genus, though it differs from *E. typicus* in the length of the rostrum and the less concave basal margin of the pronotum. The other characters appertain, however, to the generic diagnosis here given.

Fam. PYRRHOCORIDÆ.

Pyrrhocoridæ, Fieber, Eur. Hem. p. 25 (1861).
Pyrrhocorida, Stål, Hem. Afr. iii. p. 1 (1865); Mayr, Nov. Hem. p. 130 (1866).
Pyrrhocorina, Stål, En. Hem. i. p. 90 (1870).

This family is separated from the *Lygæidæ* by the absence of ocelli. It is of generally universal distribution, and has been divided by Stål into two subfamilies, both of which are represented in Central America.

Subfam. *LARGINÆ*.

Largida, Stål, Hem. Afr. iii. p. 1 (1865).
Largina, Stål, En. Hem. i. p. 90 (1870).
Largidæ, Walk. Cat. Het. v. p. 163 (1872).

The character used by Stål for the separation of this subfamily is found in the female, in which the sixth ventral segment is fissured to the base.

The Larginæ are widely distributed, and, as at present known, are most numerously represented, both in genera and species, in the Neotropical Region.

LARGUS.

Largus, Hahn, Wanz. Ins. i. p. 13 (1831); Burm. Handb. ii. 1, p. 281 (1835); Stål, En. Hem. i. p. 90 (1870).
Euryophthalmus, Lap. Ess. Hém. p. 38 (1832).
Acinocoris, Hahn, Wanz. Ins. ii. p. 113 (1834).
Lecadra, Sign. Ann. Soc. Ent. Fr. sér. 4, ii. p. 582 (1862).

In this genus the anterior coxæ are unarmed, the eyes exserted and shortly stylated, and the corium about centre slightly but distinctly ampliated.

This genus is quite confined to the Nearctic and Neotropical Regions, being but

poorly represented in the first and principally and most characteristically inhabiting the second.

Eyes very prominently stylated.

1. **Largus lunatus.**

Cimex lunatus, Fabr. Mant. Ins. ii. p. 302. 237 [1].
Cimex lunaris, Gmel. Syst. Nat. i. 4, p. 2178. 429.
Lygæus lunatus, Fabr. Ent. Syst. iv. p. 167. 110; Syst. Rhynch. p. 232. 140.
Lygæus calidus, Fabr. Syst. Rynch. p. 230. 130.
Lygæus lunulatus, Fabr. Syst. Rynch. Index, p. 16.
Acinocoris calidus, Hahn, Wanz. Ins. ii. p. 114, fig. 194; Blanch. Hist. des Ins. p. 128. 1 [2].
Largus lunulatus, Burm. Handb. ii. 1, p. 282. 1 [3]; Blanch. Hist. des Ins. p. 127. 1 [4].
Largus interruptus, H.-S. Wanz. Ins. ix. p. 181. fig. 978 [5].
Acinocoris lunatus, Stål, Hem. Fabr. i. p. 81. 1; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 315 [6].
Largus lunatus, Stål, En. Hem. i. p. 92. 1 [7]; Berg. Hem. Argent. p. 112. 139 [8].

Hab. North America, California [6].—Mexico [6]; Panama (*coll. Dist.*).—Antilles (*coll. Dist.*); Guiana, Demerara (*coll. Dist.*), Surinam [6 7 8], Cayenne [1 5]; Brazil [2 4 6 7 8], Para [3], Madeira river, Amazons (*coll. Dist.*), Rio Janeiro [7]; Peru [8]; Argentine Republic [8].

This spccies is of a very variable nature, the bright vittæ and fasciæ to the pronotum and corium becoming frequently almost obsolete. My specimen from Panama agrees well with Herrich-Schäffer's figure.

Eyes moderately stylated.

Base of metasternum and basal joint of abdomen greyish or ochraceous.

2. **Largus subligatus,** n. sp. (Tab. XX. fig. 11.)

Head black, shining, sparingly pilose. Antennæ black, the apical joint somewhat paler; basal joint distinctly incrassated at its apex, third joint very short, second longer than third, a little shorter than fourth, basal joint longest. Pronotum with the anterior lobe shining black, the posterior lobe shining piceous, coarsely and thickly punctate, the posterior margin red and impunctate; scutellum piceous, pilose, coarsely punctate, with its extreme apex sometimes obscurely reddish. Corium dull reddish; basal portion of clavus and a very large subtriangular apical patch on corium (the apex of which in some specimens extends nearly to base) black. Membrane very pale ochraceous. Body beneath black; sternum and posterior segmental margins to abdomen greyish tomentose (this tomentosity, except in carefully captured specimens, is more or less obsolete). Legs black, pilose; anterior femora armed with two subapical spines, one long and prominent, the one near apex subprominent. Rostrum black, reaching intermediate coxæ.
Long. 15–19 millim.

Hab. Guatemala, San Gerónimo, Tocoy (*Champion*).

The females in all the specimens examined are considerably larger than the males. The species principally varies, as already pointed out, in the amount of black suffusion to the corium, caused by the extension or retrenchment of the apical triangular patch.

3. **Largus affinis,** n. sp. (Tab. XX. fig. 12.)

Head shining black and pilose, the base with a narrow reddish transverse line; antennæ black, pilose, base of first joint reddish, third joint very short, second a little shorter than fourth, basal joint longest. Pronotum reddish, the lateral margins and anterior lobe reddish; anterior lobe with the frontal margin ochraceous, preceded by black punctures, with two large irregularly rounded black spots on its disk, and its posterior margin irregularly punctured with black; posterior lobe thickly and coarsely punctured with black, excepting posterior margin, which is broadly ochraceous and impunctate. Scutellum reddish ochraceous, covered with coarse black punctures, which are confluent at base, and with a faint, central, pale, longitudinal line. Corium reddish ochraceous, coarsely covered with black punctures, which, becoming confluent on disk, form an irregular transverse spot; the apical margin black, and the costal margin broadly ochraceous and impunctate. Membrane pale ochraceous and unicolorous. Body beneath piceous; antenniferous tubercles, base of rostrum, bucculæ, acetabula, bases of coxæ, anterior margin of prosternum, posterior margin of pro-, meso-, and metasternum, and lateral margins of sternum and abdomen more or less ochraceous. Abdominal segments with their posterior margins greyish tomentose. Legs black, pilose; anterior femora armed beneath with two strong subapical spines, one long and prominent, the other, near apex, subprominent. Rostrum black, reaching intermediate coxæ.

Long. 17 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

We have received but one example of this species from Mr. Champion; it is allied to *L. subligatus*, but differs by the less levigate structure of the anterior pronotal lobe, the different colour of the corium and base of antennæ, and also by the various ochraceous sternal spots.

Base of metasternum sometimes pale coloured; abdomen concolorous.

4. **Largus convivus.** (Tab. XX. figg. 13, 14.)

Largus convivus, Stål, Öfv. Vet.-Ak. Förh. 1861, p. 196. 1[1]; En. Hem. i. p. 94. 10[2].
Largus obtusus, Walk. Cat. Het. vi. p. 33. 23[3].

Hab. NORTH AMERICA, California (*coll. Dist.*); MEXICO [1] [2], Orizaba [3], Ciudad and Ventanas (*Forrer*), Jalapa (*Höge*), Oaxaca (*Mus. Berol.*); GUATEMALA, Quezaltenango, El Reposo (*Champion*).

In his 'Enum. Hem.'[2] Stål placed his *L. convivus* in the section of species which have the metasternum generally concolorous; but in a typical specimen, identified by Stål and kindly submitted to me for inspection by Dr. Aurivillius, the posterior margin of the metasternum is distinctly reddish. It is a most variable species: even in the Mexican specimens now before me the colour of the corium varies from black to red, as in the specimens figured; the base of the metasternum is reddish in some specimens, concolorous in others; whilst the red coxal spots are almost entirely absent, or not only present, but even the bases of the femora are also red, thus approaching *L. succinctus*, a species which, when specimens have been collected from New Mexico, I shall not be surprised to find claiming *L. convivus* as a varietal form.

5. **Largus longulus.** (Tab. XX. fig. 15.)

Largus longulus, Stål, Öfv. Vet.-Ak. Förh. 1861, p. 196. 2[1]; En. Hem. i. p. 94. 9[2].

Hab. Mexico [1 2] (*Bilimek & Sichel, Mus. Vind. Cæs.*), Ciudad and Milpas (*Forrer*), Valladolid in Yucatan (*Gaumer*).

A typical Mexican specimen in the Stockholm Museum is here figured. This species also varies in the colour of the corium, which in some varietal forms is red. Its only distinctive character from *L. convivus* is the more elongate form of the pronotum and abdomen. Stål [1], in his "Differentia Specifica," wrote "pectore pedibusque immaculatis;" but this, when a series of Mexican specimens are examined, proves to be incorrect, as it resembles *L. convivus* in these respects, being either totally without these markings, or having even the bases of the femora red, as in extreme forms of the other species.

6. **Largus cinctus.** (Tab. XX. figg. 16–19.)

Largus cinctus, H.-S. Wanz. Ins. vii. p. 6. fig. 683[1]; Stål, Stett. ent. Zeit. xxiii. p. 315. 221[2]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 315. 1[3].

Capsus succinctus, var. *a*, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 338. 2.

Largus varians, Stål, En. Hem. i. p. 94. 12[4].

Hab. North America, Oregon [3], Nevada [3], Arizona [3], California [3].—Mexico [1 2 3] (*coll. Sallé*), Oaxaca (*coll. Dist.*), Valladolid in Yucatan (*Gaumer*); Guatemala, San Gerónimo, Capetillo, Tocoy (*Champion*); Costa Rica, Irazu, Rio Sucio, San Francisco (*Rogers*); Panama (*coll. Dist.*), Volcan de Chiriqui, 2000–3000 feet (*Champion*).—Colombia, Bogota [4] (*coll. Dist.*), Antiochia [4], Manaure (*Simons*).

I have been quite unable to separate *L. cinctus*, H.-S., in all its varietal phases from *L. varians*, Stål, with its number of varietal forms described by that author. There is little doubt that had Stål been able to examine the long series of Central-American specimens now before me, he would not have described his Colombian specimens as a distinct species. The four specimens figured, of which figs. 16, 17, and 19 are from Panama and fig. 18 from Guatemala, show the varietal extremes; but even here it is evident that some of the Panama specimens approximate more closely to the Mexican type than do those from Guatemala. Stål put considerable reliance on the colour of the membrane of his *L varians*, "*venis concoloribus*;" but in some Bogota specimens in my own collection the veins are dark, and this character is uncertain throughout the whole series from various habitats.

7. **Largus bipustulatus.** (Tab. XX. figg. 20, 21.)

Largus bipustulatus, Stål, Öfv. Vet.-Ak. Förh. 1861, p. 196. 3[1]; Stett. ent. Zeit. xxiii. p. 315. 224; En. Hem. i. p. 95. 14[2].

Largus socius, Stål, Öfv. Vet.-Ak. Förh. 1861, p. 197. 4[3]; Stett. ent. Zeit. xxiii. p. 315. 225; En. Hem. i. p. 95. 15[4].

Largus pulverulentus, Walk. Cat. Het. vi. p. 33. 22[5].

Hab. Mexico [1 2 3 4], Orizaba [5].

Having been enabled to examine typical specimens of the two forms described by Stål, I can detect no specific differences of a structural character, but only what to me appears colour-variation, and that in a direction which is common in other species of the genus. Stål certainly did not, especially in his later years and more matured views, err in the direction of ultra specific nomenclature; and though these descriptions were published in 1861, the two described "species" are stated to be "valde affinis." Fig. 20 is that of the typical *L. bipustulatus*, Stål; and fig. 21 represents the form described by Stål under the name of *L. socius*, and redescribed by Walker as *L. pulverulentus*.

FIBRENUS.

Fibrenus, Stål, Öfv. Vet.-Ak. Förh. 1861, p. 195; En. Hem. i. p. 90 (1870).

This is an easily recognized and well-marked genus, having the anterior coxæ spined, and the anterior lobe of the pronotum in the male sex very tumid.

Two species of *Fibrenus* are described, both of which have been received from Central America.

1. **Fibrenus globicollis.** (Tab. XX. figg. 24, 25.)

Largus globicollis, Burm. Handb. ii. 1, p. 282. 2 [1].
Fibrenus globicollis, Stål, En. Hem. i. p. 96. 1 [2].

Hab. PANAMA (*coll. Dist.*), Bugaba (*Champion*).—COLOMBIA, Buenaventura (*Dr. Thieme, coll. Oberthür*); BRAZIL, Para [1] [2].

This is a very variable species, and is closely allied to the following species, *F. gibbicollis*, Stål; in fact, beyond its constantly smaller size, there is little structural character to warrant its separation. Stål [2], in specifying the differences between the two species, writes "metastethio toto nigro, nec postice flavescente." This is not the case with a long series of Bugaba specimens, though applying to other Panama examples in my own collection. Stål further observes, "segmentis flavescentibus ventris &c.," which, on the contrary, apply to the Bugaba series, but not to the other Panama specimens referred to, in which the abdomen is totally black. Again, in the Bugaba form of the species the posterior lobe of the pronotum is red, whilst in my black-abdomened Panama specimens the posterior margin of that lobe only is red, as described by Burmeister.

2. **Fibrenus gibbicollis.** (Tab. XXI. fig. 1.)

Fibrenus gibbicollis, Stål, Öfv. Vet.-Ak. Förh. 1861, p. 198. 1 [1]; En. Hem. i. p. 96. 2 [2].

Hab. MEXICO [1] [2], Oaxaca [2], Jalapa (*Höge*), Valladolid in Yucatan (*Gaumer*); BRITISH HONDURAS, river Sarstoon (*Blancaneaux*).

This appears to be the northern representative of the last species, and is also of a very variable character as regards colour, though constant in respect of size. The variation principally applies to the pronotum, of which the posterior lobe has a broad red hinder margin, varying in that respect until in some specimens it is totally black. A specimen from British Honduras, somewhat intermediate in that respect, is here figured.

THERANEIS.

Theraneis, Spin. Ess. Hém. p. 179 (1837); Stål, En. Hem. i. p. 90 (1870).

This genus differs from *Fibrenus* in having the anterior coxæ unarmed; and from *Largus* it is distinguished by the elongated body and the non-dilated lateral margins of the corium. The head is transversely excavated between the eyes.

Three species have been recorded, all Neotropical, and occurring south of our fauna; to these may be added the two from Central America here described.

1. **Theraneis pulchra**, n. sp. (Tab. XXII. fig. 1.)

Black; antennæ with the second, third, and fourth joints ochraceous, the second with the extreme base and the fourth with the extreme apex fuscous. Corium and lateral posterior angles of the pronotum reddish ochraceous. Apical angle of corium and margins of membrane greyish white. Anterior portion of head above, anterior and posterior margins of frontal lobe of pronotum, and a central longitudinal line to posterior pronotal lobe pale greyish pubescent. Body beneath sparingly covered with greyish pilosity. Tibiæ palely setose, tarsi pale brownish.

Antennæ with the first and fourth and the second and third joints subequal in length; posterior lobe of pronotum thickly and coarsely punctate, scutellum more faintly so; anterior femora armed beneath with two spines near apex, one considerably larger than the other.

Long. 8–9½ millim.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet, Bugaba (*Champion*).

This species is allied to *T. constricta*, Stål, which was recorded from Colombia, and from which it differs by the different colour of the antennæ, and the unicolorous clavus and corium, black and opaque membrane, &c.

2. **Theraneis dissimilis**, n. sp. (Tab. XXI. fig. 24.)

Head black, thickly covered with greyish pilosity; antennæ black, first and fourth joints longest and subequal in length, second longer than third, which is shortest. Pronotum pale ochraceous, anterior lobe (excluding lateral and anterior margins) and two large subquadrate spots at base of posterior lobe pale brownish; the anterior lobe is defined posteriorly by a transverse row of very deep, coarse, dark punctures; and there are a few scattered but paler dark punctures between the basal subquadrate spots. Scutellum fuscous, with the apex more or less ochraceous. Corium pale ochraceous, a large subtriangular spot on centre of disk, and clavus (excluding margins) ferruginous. Membrane ferruginous. Head and body beneath, rostrum, and legs fuscous or ferruginous; anterior, posterior, and lateral margins of prosternum, posterior margins of meso- and metasternum, coxæ, lateral margins and a central longitudinal fascia to abdomen (the last not reaching beyond fourth abdominal segment) ochraceous; tarsi beneath dull ochraceous.

Long. 9–10 millim.

Hab. Costa Rica, Cache (*Rogers*); Panama, Bugaba (*Champion*).

Var. *a*. Above with the ferruginous markings paler, but larger, and becoming more or less suffused with the ochraceous ground-colour, which is also darker.

Var. *b*. Above with the ferruginous markings larger, and on corium occupying the whole of disk, with the exception of the lateral and apical margins; clavus, with the exception of apical margins, totally ferruginous; membrane somewhat abbreviated, exposing apex of upper surface of abdomen, which is ochraceous.

Three specimens only of this species have been received, two from Costa Rica and one from Panama; and as they all vary, it is probable that *T. dissimilis* must be of a

very protean character. The two Costa-Rican specimens represent the type (which is figured) and the var. *a*; and the specimen sent home from Bugaba by Mr. Champion is described as var. *b*.

STENOMACRA.

Stenomacra, Stål, En. Hem. i. pp. 90, 97 (1870).

This genus is closely allied to the preceding, but differs in not having the head excavated between the eyes.

Stenomacra appears to be quite confined to the Neotropical Region.

1. **Stenomacra marginella.** (Tab. XX. fig. 23, var.)

Largus marginellus, H.-S. Wanz. Ins. ix. p. 182. 7, fig. 982[1].
Theraneis marginella, Stål, Stett. ent. Zeit. xxiii. p. 315. 226[2].
Stenomacra marginella, Stål, En. Hem. i. p. 98. 3[3].

Hab. MEXICO [1 2 3] (*Bilimek, Mus. Vind. Cæs.; Mus. Berol.*), Jalapa (*Höge*), Milpas (*Forrer*); GUATEMALA, Capetillo, San Gerónimo (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA (*Boucard*), Volcan de Chiriqui, 2000 to 3000 feet (*Champion*).—COLOMBIA, Bogota [3], Antioquia [3]; BRAZIL [1].

This species is of a variable character. In some specimens almost the apical half of the scutellum is luteous, whilst the femora are either wholly luteous, as in Herrich-Schäffer's figure, or have their extreme apices concolorous with the tibiæ; and sometimes the apical halves of the posterior femora are also fuscous, as in the variety here figured, which is from Guatemala, similarly marked specimens from Mexico being contained in the Vienna and Berlin Museums. These varieties do not constitute local races.

2. **Stenomacra cliens.** (Tab. XX. fig. 22.)

Theraneis cliens, Stål, Stett. ent. Zeit. xxiii. p. 315. 227[1].
Stenomacra cliens, Stål, En. Hem. i. p. 98. 4[2].

Hab. MEXICO [1 2].

A typical specimen in the Stockholm Museum is here figured.

ARHAPHE.

Arhaphe, Herrich-Schäffer, Wanz. Ins. ix. p. 183 (1853); Stål, En. Hem. i. p. 90 (1870).

In *Arhaphe* the head is subglobose, and convex both above and beneath.

Two species are recorded, and are both found in Mexico, one of which is also an inhabitant of North America.

1. **Arhaphe carolina.**

Arhaphe carolina, H.-S. Wanz. Ins. p. 183, f. 968[1]; Stål, En. Hem. i. p. 98. 1[2].

Hab. North America, Carolina [1].—Mexico [2].

This species is here included on the authority of Stål [2] alone, as I have seen it in no Mexican collection which I have examined.

2. **Arhaphe cicindeloides.** (Tab. XXI. fig. 2.)

Arhaphe cicindeloides, Walk. Cat. Het. vi. p. 36. 2[1].

Hab. Mexico, Oajaca [2], Ciudad (*Forrer*).

JAPETUS.

Head regularly circular and globose, convex above, and subconvex beneath, considerably wider than pronotum; eyes large and globose, situate about the centre of each lateral margin. Pronotum subequal in length to head, anterior lobe longest and subglobose. Scutellum slightly gibbous. Body linear; corium and membrane much abbreviated. Rostrum reaching anterior coxæ.

This genus is allied to *Arhaphe*, but differs by the elongate and linear body, the circular and globose head, &c.

1. **Japetus sphæroides,** n. sp. (Tab. XXI. fig. 3.)

Black, sparingly but distinctly pilose; corium warm ochraceous, membrane greyish with a large apical fuscous spot.

Antennæ with the first and fourth joints subequal in length, second a little longer than third, which is shortest; head coarsely punctate; pronotum with a deep and broad impression separating the anterior and posterior lobes, the last of which is anteriorly depressed and coarsely punctate. Scutellum coarsely punctate. Corium reaching the third abdominal segment; membrane extending only to the fourth abdominal segment. Anterior femora subprominently spined beneath near apex.

Long. 9 millim.

Hab. Guatemala, San Gerónimo (*Champion*).

One specimen only of this extraordinary genus and species has been received from Mr. Champion.

Subfam. *PYRRHOCORINÆ.*

Pyrrhocorida, Stål, Hem. Afr. iii. p. 1 (1865).
Pyrrhocorina, Stål, En. Hem. i. p. 101 (1870).
Pyrrhocoridæ, Walk. Cat. Het. v. p. 163 (1872).

The Pyrrhocorinæ were separated by Stål from the Larginæ on the character of the sixth ventral segment, which is entire in both sexes.

Only two genera found in America are comprised in this subfamily, which is principally and most characteristically represented in the eastern tropics, its geographical distribution thus being in contrast with that of the Larginæ.

PYRRHOCORIS.

Pyrrhocoris, Fall. Nov. Hem. disp. Meth. p. 9 (1814); Hem. Suec. i. p. 45 (1829); Stål, En. Hem. i. p. 103 (1870).
Platynotus, Schill. Beitr. zur Ent. i. p. 37 (1829).
Meganotus, Lap. Ess. Hém. p. 38 (1832).

This is a decidedly Palæarctic genus, extremely limited in species, and, but for the following identification, not hitherto recorded from America.

Pyrrhocoris is so distinct in structure and appearance from the other genus alone enumerated in this work, that the figure of one of its species here given will convey a better idea of its structural characters than any comparative diagnosis, which in this case is almost impossible from the absence of allied genera.

1. **Pyrrhocoris apterus.** (Tab. XXI. fig. 25.)

Cimex apterus, Linn. Syst. Nat. ed. 10, i. p. 447. 55; Syst. Nat. ed. 12, i. 1, p. 727. 78; De Geer, Mém. iii. p. 276. 20; Fabr. Syst. Ent. p. 721. 121; Goeze, Ent. Beitr. ii. p. 213. 78; Fabr. Spec. Ins. ii. p. 366. 169; Schranck, En. Ins. Austr. p. 281. 541; Herbst, Gem. Naturg. vi. p. 260. 15; Fabr. Mant. Ins. ii. p. 301. 222; Gmel. Syst. Nat. i. 4, p. 2172. 78; Vill. Entom. i. p. 514. 112; Rossi, Faun. Etr. ii. p. 241. 1322; Tigny, Hist. des Ins. ed. 2, iv. p. 279, f. 5.
Lygæus apterus, Fabr. Ent. Syst. iv. p. 161. 90; Hausm. in Illig. Mag. für Ins. i. p. 229; Wolff, Ic. Cim. iii. p. 102, f. 102; Fabr. Syst. Rhynch. p. 227. 116; Latr. Gen. Cr. et Ins. iii. p. 122.
Ligæus apterus, Walck. Faune Paris. ii. p. 346. 3.
Pyrrhocoris calmariensis, Fall. Suppl. Cim. Suec. p. 6; Hem. Suec. Cim. p. 45. 1; Thoms. Skand. Ins. p. 113. 1.
Platynotus apterus, Schill. Beitr. zur Ent. i. p. 57; Hahn, Wanz. Ins. i. p. 19, f. 11; Kol. Mel. Ent. ii. p. 69. 32.
Astemma apterum, Spin. Ess. Hém. p. 178. 1.
Astemma aptera, Blanch. Hist. des Ins. p. 129, pl. 5. f. 1.
Pyrrhocoris apterus, H.-S. Nom. Ent. i. p. 43; Burm. Handb. ii. 1, p. 286. 12; A. & S. Hist. des Hém. p. 269. 1; Flor. Rhynch. Livl. i. p. 212. 1; Fieb. Eur. Hem. p. 163. 3; Dougl. & Scott, Brit. Hem. p. 164. 1; Stål, En. Hem. i. p. 115. 1; Saund. Trs. Ent. Soc. 1875, p. 138.
La Punaise rouge des jardins, Geoffr. Hist. des Ins. i. p. 440. 11, pl. 9. f. 4.
Stoll, Pun. fig. 103.

Hab. Costa Rica (*van Patten*).—Europe; Africa, Morocco (*coll. Dist.*), Mogador (*coll. Dist.*); Asia, Cochin (*coll. Dist.*).

The inclusion of this well-known European insect in the Central-American fauna is based on the fact of several specimens having been brought home by Van Patten from Costa Rica. It probably owes its introduction there to accidental circumstances. In the North-American fauna, which is not only similar to the Palæarctic, but also moderately well worked, no record of its appearance has been published.

One of the Costa-Rican specimens is here figured to show its strictly non-varietal character in its new habitat.

DYSDERCUS.

Dysdercus, Amyot & Serville, Hist. des Hém. p. 272 (1843); Stål, Hem. Afr. iii. p. 13 (1865); En. Hem. p. 103 (1870).

Astemma, Lap. Ess. Hém. p. 37 (1832).

Piezodera, Sign. Ann. Soc. Ent. de Fr. sér. 3, viii. p. 953 (1861).

This genus and one close ally possess a fundamental difference from the other genera of the subfamily, as pointed out by Stål, in having the wings complete and without a hook. Its species are very widely distributed, and found throughout the tropical and subtropical portions of the world; and their wide variation in colour and markings, especially as found in Central America, affords perplexing features to their right discrimination and identification. The general form and contour is often a trustworthy guide; but the colour differences are frequently misleading, unless a long series is examined.

1. **Dysdercus mimus.** (Tab. XXI. fig. 4.)

Capsus mimus, Say, New Harm. Ind. Dec. 1831; Compl. Writ. i. p. 338[1].

Dysdercus mimus, Stål, Stett. ent. Zeit. xxiii. p. 316. 231[2]; En. Hem. i. p. 120. 14[3]; Uhler, Bull. U.S. Geol. & Geogr. Surv. ii. p. 314. 1[4].

Hab. North America[1], Texas[4], California[4].—Mexico[2 3] (*Hiller*, *Mus. Vind. Cæs.*), Oaxaca (*Mus. Berol.*), Mazatlan, Presidio, Ventanas (*Forrer*), Jalapa (*Höge*); Guatemala, Zapote, Dueñas, near the city (*Champion*); Nicaragua, Chontales (*Janson*), Corcuera (*M'Niel*, *Mus. Vind. Cæs.*); Costa Rica, Irazu, Cache (*Rogers*).—Cuba, Hayti[4]; St. Domingo, Port au Prince (*Mus. Berol.*).

Mr. Uhler[4], who had evidently examined a large series of specimens of this species, truly observes:—"In some varieties from Mexico the head, pronotum, and corium are entirely black; and from this to the variety with only a point of black on the middle of the corium every variety occurs." To this list may be added varieties in my own collection, in which the corium is totally ochraceous or only very slightly infuscated. The Guatemalan specimen here figured represents one of the very dark varieties.

According to Mr. Uhler[4], this species in Hayti "abounds in gardens, and affects small growths in damp or low grounds."

2. **Dysdercus albidiventris.** (Tab. XXI. figg. 5, 10.)

Dysdercus albidiventris, Stål, Öfv. Vet.-Ak. Förh. 1854, p. 236. 2; Stett. ent. Zeit. xxiii. p. 315. 230[1]; En. Hem. i. p. 121. 15[2] (excl. *C. mimus*, Say); Uhler, Bull. U.S. Geol. & Geogr. Surv. ii. p. 314. 2[3].

Dysdercus lunulatus, Uhler, Proc. Ent. Soc. Philad. i. 24[4]; Stål, En. Hem. i. p. 124. 30.

Hab. North America, Texas[3], California[3].—Mexico[1 2 3 4] (*coll. Sign.*; *Mus. Berol.*), Orizaba (*Bilimek*, *Mus. Vind. Cæs.*), Presidio (*Forrer*); Guatemala, Zapote, Teleman

(*Champion*); Nicaragua, Chontales (*Janson*), Corcuera (*M'Neil, Mus. Vind. Cæs.*); Costa Rica, Irazu, Cache (*Rogers*); Panama [3].

Two varieties of this species are here figured. Fig. 5 represents a specimen received from Costa Rica, and is a melanic variety, whilst the Nicaraguan specimen (fig. 10) exhibits the paler and more usual form of the species, and agrees with a typical specimen, identified by Stål, in the collection of Dr. Signoret.

3. **Dysdercus flavo-limbatus.** (Tab. XXI. fig. 6.)

Dysdercus flavo-limbatus, Stål, Öfv. Vet.-Ak. Förh. 1861, p. 198. 1[1]; En. Hem. i. p. 121. 16[2].

Hab. Mexico [1 2] (*Bilimek, Mus. Vind. Cæs.*), Presidio (*Forrer*); Guatemala, Zapote (*Champion*).

4. **Dysdercus obscuratus,** n. sp. (Tab. XXI. figg. 8, 9.)

Dysdercus flavo-limbatus, Stål, var. ??

Closely allied to *D. flavo-limbatus*, Stål, but differing in having the anterior lobe of the pronotum (excluding anterior and lateral margins) black, with a reddish spot on each side; beneath, the ground-colour of the sternum and abdomen is black and not red; the femora piceous.

Long. 10–15 millim.

Hab. Guatemala, San Gerónimo, San Juan (*Champion*); Costa Rica, Cache (*Rogers*).

I have felt constrained to regard this as a distinct species, or, at all events, to separate it under a distinct name, in consequence of the constant colour differences, especially those of the underside. I have examined nine specimens, which exhibit no variation in this respect, whilst in a series of Mexican examples of *D. flavo-limbatus*, including a typical one from the Stockholm Museum, the red and not black markings are equally constant.

Two Costa-Rican specimens are here figured.

5. **Dysdercus incertus,** n. sp. (Tab. XXI. fig. 7.)

Head red, with a basal line, the apex, and eyes black; antennæ black, with the extreme base of the first joint red, first joint a little longer than second, third short (remainder mutilated). Pronotum with the anterior lobe red, the posterior lobe ochraceous; the first with the lateral margins ochraceous, and the anterior collar white, bordered inwardly with black; posterior lobe with a large discal black spot. Scutellum black. Corium ochraceous, with a very large and irregularly shaped black spot occupying nearly the apical third; clavus with a central longitudinal black streak. Membrane black, the apex pale fuliginous, and the apical margin whitish. Head beneath red, body beneath ochraceous, anterior and posterior margins of prosternum, posterior margins of meso- and metasternum, acetabula, and posterior segmental margins whitish; anterior margin of prosternum inwardly margined with black; basal disks of abdominal segments infuscated. Legs with the femora obscure castaneous, tibiæ and tarsi fuscous, coxæ and trochanters ochraceous. Rostrum obscure ochraceous, with the apex black, and just passing posterior coxæ.

Long. 12 millim.

Hab. Costa Rica, Cache (*Rogers*).

D. incertus is allied to *D. obscuratus*, and is another difficult form of this protean

genus to definitely identify either as an extreme variety of the last-named species, or as constituting in itself a new species. I have inclined to the last view; and the distinct markings of the corium and the colour of the apex of the membrane favour that conclusion.

6. **Dysdercus concinnus.** (Tab. XXI. figg. 11, 12, & 15.)

Dysdercus concinnus, Stål, Ofv. Vet.-Ak. Förh. 1861, p. 198. 2[1]; En. Hem. i. p. 121. 17[2].
Dysdercus mundus, Walk. Cat. Het. v. p. 181. 8[3].

Hab. MEXICO [1 2 3], Cornuvacca (*Bilimek, Mus. Vind. Cæs.*), Presidio (*Forrer*); BRITISH HONDURAS, river Sarstoon (*Blancaneaux*); GUATEMALA, Zapote, Capetillo (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Colon (*Boucard*), Volcan de Chiriqui, 2000 to 3000 feet and 2500 to 4000 feet (*Champion*).—COLOMBIA, Bogota [2] (*coll. Dist.*), Antioquia [2], Honda (*Dr. Thieme, coll. Oberthür*), Manaure (*Simons*).

This species is of a very protean character. The head is either red as in fig. 15, spotted with black as in fig. 11, or wholly black as in fig. 12. The scutellum is generally black; but amongst Mexican specimens it is sometimes found to be ochraceous. The anterior margin or collar of the pronotum is usually white, but sometimes marked with black as in fig. 11. The femora are either reddish or partly so, or wholly black, as shown by the varieties here illustrated; and the abdomen beneath is more or less prominently banded with black.

A specimen from British Honduras is represented by fig. 11, and figg. 12 & 15 are those of Guatemalan forms.

7. **Dysdercus splendidus,** n. sp. (Tab. XXI. fig. 14.)

Head and base of first joint of antennæ red; eyes and antennæ (excepting apical joint, which is pale fuscous) black; pronotum red, anterior collar white, inwardly margined with black, and with a large basal spot occupying nearly half of disk black, margined anteriorly with a yellow transverse line; scutellum pale yellow; corium white, basal costal margin and base of clavus pale yellow, and with a large irregularly shaped black spot about centre of costal margin; membrane black, with a narrow pale margin; head and body beneath reddish; anterior and posterior margins of prosternum and posterior discal portions of second, third, and fourth abdominal segments whitish; meso- and metasternum, coxæ, abdominal base, and posterior margins of fifth and sixth abdominal segments yellow; legs piceous, femora more or less reddish; rostrum red, with the apex black, and reaching a little beyond posterior coxæ.
Anterior femora armed beneath with two spines near apex.
Long. 13 millim.

Hab. PANAMA, Bugaba (*Champion*).

It is with considerable diffidence that I have described as a distinct species this very strongly and beautifully marked insect; and, though apparently unlikely, I shall not be surprised to find it eventually proved to be but an extreme varietal form of the protean *D. concinnus*.

8. **Dysdercus oncopeltus,** n. sp. (Tab. XXI. fig. 13.)

Head red; antennæ black, extreme base of first joint red, apical joint longest, third shortest, first a little longer than second. Pronotum black, with the lateral margins broadly and irregularly ochraceous. Scutellum and clavus black. Corium ochraceous, with a large transverse black macular fascia crossing at inner angle. Membrane black. Head beneath red; body beneath black; anterior and posterior margins of prosternum, posterior margins of meso- and metasternum, acetabula, and posterior margins of second, third, fourth, and sixth abdominal segments pale luteous; legs black, coxæ red, rostrum piceous and reaching base of third abdominal segment. Anterior femora armed with two short spines near apex.
Long. 13–14 millim.

Hab. PANAMA, Volcan de Chiriqui, 4000 to 6000 feet (*Champion*).

This is a very distinctly marked species, especially on the underside. As in many other species from Panama, the principal colour differences are of a decidedly melanic character.

9. **Dysdercus obliquus.** (Tab. XXI. figg. 16, 17, & 18.)

Pyrrhocoris obliquus, H.-S. Wanz. Ins. vii. p. 19, fig. 701[1].
Dysdercus bimaculatus, Stål, Öfv. Vet.-Ak. Förh. 1854, p. 236. 1; Freg. Eug. Resa, Ins. p. 253. 87[2].
Dysdercus obliquus, Stål, Stett. ent. Zeit. xxiii. p. 316. n. 232[3]; En. Hem. i. p. 121. 20[4]; Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 314. 4[5].

Hab. NORTH AMERICA, California[5].—MEXICO[1 3 4 5] (*Mus. Berol.; Bilimek, Mus. Vind. Cæs.*), Jalapa (*Höge*), Ciudad in Durango, Milpas (*Forrer*); GUATEMALA, Capetillo (*Champion*); COSTA RICA (*Mus. Berol.*), Irazu (*Rogers*); PANAMA[5], Colon (*Boucard*).—ISLAND OF ST. JOSEPH[2 4]; COLOMBIA, Manaure (*Simons*); ECUADOR, Puna[2 4].

Herrich-Schäffer's drawing is so useless for any practical purpose, that we have re-figured the species, and also two of its varietal forms. The variation pursues a somewhat similar course as in other species. Thus in fig. 17 the scutellum is wholly ochraceous, in fig. 16 it has the base black, whilst it is wholly black in the Mexican specimen represented by fig. 18. A specimen from Costa Rica is represented by fig. 16; and fig. 17 refers to an example from Guatemala.

10. **Dysdercus chiriquinus,** n. sp. (Tab. XXI. fig. 22.)

Body above obscure ochraceous; antennæ, scutellum, a rounded spot on disk of corium, near inner angle, and membrane black, the last with the apical margin whitish. Antennæ with the extreme base of first joint ochraceous, first and second joints subequal in length, fourth longest, and third shortest. Extreme apex of head spotted with black. Pronotum with the anterior collar whitish, inwardly margined with black, and with the anterior lobe marked off by a very deep transverse incision. Head and body beneath ochraceous. Anterior and posterior margins of prosternum, posterior margins of meso- and metasternum, acetabula, and posterior margins of abdominal segments broadly whitish, which is more or less distinctly narrowly margined with black. Rostrum ochraceous more or less suffused with piceous, in the ♂ almost reaching fifth abdominal segment, in the ♀ almost reaching abdominal apex. Legs ochraceous, tibiæ and tarsi somewhat piceous.
Long. ♂ 14 to 15 millim., ♀ 17 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet and 2500 to 4000 feet (*Champion*).

We have received three (two male and one female) specimens of this species. The length of the rostrum and its distinct markings sufficiently distinguish it from any other species here enumerated, and its nearest ally appears to be *D. longirostris*, Stål, a Brazilian species.

11. **Dysdercus capitatus,** n. sp. (Tab. XXI. fig. 21.)

Body both above and beneath and legs ochraceous. Head and antennæ black, the last with the base of first joint brownish. Anterior lobe of pronotum red, with the anterior collar white inwardly, and narrowly margined with black. Membrane bronzy, with the apical margins very pale. Anterior and posterior margins of prosternum, posterior margins of meso- and metasternum, acetabula, and posterior margins of abdominal segments pale luteous, the last with the incisures black. Legs ochraceous, tarsi piceous. Rostrum ochraceous, the apical joint piceous, and reaching the third abdominal segment.

Long. 14 millim.

Hab. MEXICO (*Mus. Holm.*).

Dr. Aurvillius, to whom I am indebted for the examination of this species, writes, "Allied to *D. ferrugineus* from Honolulu." This probably refers to a MS. name of the late Dr. Stål.

12. **Dysdercus ruficollis.** (Tab. XXI. figg. 19, 20.)

Cimex ruficollis, Linn. Mus. Lud. Ulr. p. 180. 14; Fabr. Syst. Ent. p. 719. 110; Goeze, Ent. Beytr. ii. p. 256. 13; Fabr. Spec. Ins. ii. p. 364. 153; Mant. Ins. ii. p. 299. 199; Gmel. Syst. Nat. i. 4, p. 2171. 388.

Cimex fulvo-niger, De Geer, Mém. iii. p. 340. 15, t. 34. f. 21.

Lygæus ruficollis, Fabr. Ent. Syst. iv. p. 153. 63; Syst. Rhynch. p. 221. 80[1].

Lygæus annulus, Fabr. Syst. Rhynch. p. 227. 114.

Pyrrhocoris annulus, Hahn, Wanz. Ins. ii. p. 13, f. 123[2].

Pyrrhocoris ruficollis, Burm. Handb. ii. 1, p. 285. 7[3].

Astemma ruficollis, Blanch. Hist. des Ins. p. 129. 4[4].

Astemma annulus, Blanch. Hist. des Ins. p. 129. 5[5].

Dysdercus ruficollis, Stål, Berl. ent. Zeit. x. p. 382. 2; Mayr, Nov. Hem. p. 133[6]; Stål, Hem. Fabr. i. p. 84. 3; En. Hem. i. p. 123. 23[7]; Berg, Hem. Argent. p. 114. 143[8].

Hab. NICARAGUA, Chontales (*Janson*); PANAMA (*Boucard*), Volcan de Chiriqui, 2000 to 3000 feet (*Champion*).—COLOMBIA[7 8], Bogota[7], Manaure (*Simons*); VENEZUELA[8]; GUIANA, Demerara[3], Cayenne[8]; BRAZIL[1 2 4 5 7], Para[3], Madeira river, Amazons (*coll. Dist.*), Pernambuco (*Forbes*), San Paolo[7], Bahia[3 7], Rio Janeiro[3 6 7]; ECUADOR[8]; ARGENTINE REPUBLIC[8].

Prof. Berg[8] has given Mexico as a habitat for this species, but I have failed to find any authority for the statement, nor have I seen the species in any of the numerous Mexican collections which I have been able to examine.

Like other species of the genus, it is of a very variable character, both the scutellum and head being sometimes ochraceous, and sometimes black. In some varieties the corium has also the apex broadly black as in Hahn's figure[2]; but this form of the

species has not yet been received by us from Central America. The apical joint of the antennæ has the base either pale whitish or unicolorous.

13. **Dysdercus ruficeps.** (Tab. XXI. fig. 23.)

Lygæus ruficeps, Perty, Del. An. p. 172, t. 34. f. 7; H.-S. Wanz. Ins. iii. p. 95, f. 319[1].
Astemma ruficeps, Blanch. Hist. des Ins. p. 129. 3[2].
Dysdercus ruficeps, Stål, En. Hem. i. p. 123. 26[3].

Hab. NICARAGUA, Chontales (*coll. Dist.*); PANAMA, Matachin (*Dr. Thieme, coll. Oberthür*).—COLOMBIA (*Mus. Vind. Cæs.*), Bogota[3] (*coll. Dist.*); BRAZIL[1 2 3].

Fam. CAPSIDÆ.

Astemmites, Laporte, Ess. des Hémip. p. 36 (1835).
Capsini, Burm. Handb. Ent. ii. p. 263 (1835).
Bicelluli, Am. & Serv. Hist. des Hém. p. 275 (1843).
Phytocoridæ, Fieb. Eur. Hem. p. 26 (1861).
Isometopidæ, Fieb. Eur. Hem. p. 26 (1861).
Capsidæ, Westw. Intr. Class. Ins. ii. p. 479 (1840); Reut. Hem. Gymn. Eur. t. i. p. 13 (1878).
Cimicidæ, Reut. (part.) Bih. Vet.-Ak. Handl. iii: 1, p. 3 (1875).

The members of this family are readily recognized by the elongated and four-jointed antennæ, of which the second joint is frequently more or less thickened at its apex, and the two terminal joints are always more or less slender, and also, and principally, by the corium terminating in a distinctly differentiated section, called the cuneus.

If we except a very considerable knowledge of the Palæarctic Capsidæ, and a less acquaintance with those of the Nearctic Region, we may safely presume to say that those of the Ethiopian, Oriental, and Australian Regions are practically unworked and unknown. Of the Neotropical fauna the late Dr. Stål described many from Rio Janeiro; and Dr. Carl Berg has recently done the same for those of the Argentine Republic, whilst owing to the unexampled success of our collector Mr. Champion in procuring specimens of this family both in Guatemala and Panama, very much additional knowledge has been acquired. Mr. Champion's captures in Central America, the description of which forms the ground-work and speciality of the following pages, are, without doubt, the largest and most extensive contribution to our knowledge of the Capsidæ that have ever been, as yet, brought from the tropics; and from their multiplicity of generic forms, their extreme diversity of type, and their frequently extraordinary mimetic analogies with representatives of other families, they create an ardent desire to know more of the exotic members of this little-worked family.

As might be anticipated, the acquisition of so much material belonging to an unworked field has necessitated not only the description of a large number of species, but the erection of numerous new genera for their reception.

As regards their systematic arrangement, I have advanced no new method (a course impossible by the exigencies of time and the scope of an extensive faunistic work), but have followed in most essential particulars the classificatory scheme formulated by Dr. Reuter in 1875, which is in conformity with the views and practice of the late Dr. Stål, and thus in unison with the system adopted for the previous families.

A superficial acquaintance with American Capsidæ would lead, and has inclined excellent authorities, to the opinion that European genera are largely included in the fauna. A better acquaintance, however, supported by sufficient material, abundantly proves that the family is not peculiar in this respect, but in America possesses a distinctive faunistic character, embracing a number of well-marked and often extremely specialized genera.

Subfam. *CAPSINÆ.*

Capsina (part.), Reuter, Bih. Vet.-Ak. Handl. iii: 1, p. 4 (1875); Hem. Gymn. Eur. t. i. p. 15 (1878); Berg, Hem. Argent. p. 120 (1879).

Myridina, Berg, Hem. Argent. p. 117 (1879).

In this subfamily the ocelli, as stated by Dr. Reuter, are "*haud distinguendi.*"

All comparative generalizations as to the geographical distribution of the Capsinæ are rendered for a long time hopeless by the little attention hitherto paid to their collection in tropical regions. When we reflect that the Capsinæ constitute one of the most numerous group of insects, and that collectors have been enabled, regardless of time and money, and at their own risk of health and life, to add to our knowledge of the insect world, we must deplore the circumstance that size and beauty have been the incentives to their exertions, and that it remains for another generation to deal with some of the obscure, but most numerous and instructive, families of insects.

Division **MIRARIA.**

Miraria, Reuter, Bih. Vet.-Ak. Handl. iii: 1, p. 5 (1875, incl.).

In this division I recognize the genera whose species have the head distinctly longitudinally sulcated between the eyes, and the antennæ inserted on the lateral margins of the head in front of the eyes.

I have allowed this division to embrace considerable diversity of generic form; but in dealing alone with one fauna, or rather with a portion only of one fauna, I have thought it best to avoid, as far as possible, increased divisional separation, until the family, as a whole, is generally more worked and better known.

The Miraria have probably an almost world-wide distribution; and in America we know that they are distributed throughout both the Nearctic and Neotropical Regions.

MIRIS.

Miris, Fabr. Syst. Rhynch. pp. ix et 253 (1803); Burm. Handb. ii. 1, p. 264 (1835); Am. & Serv. Hist. des Hém. p. 277 (1843); Kirschb. Caps. v. Nassau (1855); Walk. Cat. Het. vi. p. 48 (1873); Reuter, Bih. Vet.-Ak. Handl. iii. 1, p. 8 (1875).

Myris, Hahn, Wanz. Ins. ii. p. 73 (1834).

Lopomorphus, Dougl. & Scott, Brit. Hem. p. 293 (1865).

In this genus the posterior margin of the pronotum is truncated and the scutellum is distinctly punctate.

1. **Miris affinis.**

Miris affinis, Reuter, Öfv. Vet.-Ak. Förh. 1875, p. 59. n. 1[1].

Miris instabilis, Uhler, Bull. U.S. Geol. & Geogr. Surv. ii. p. 316[2].

Hab. North America, Wisconsin [1], Pennsylvania [1], Colorado [2].—Mexico (*coll. Dist.*).

I have felt little hesitation in identifying a single Mexican specimen as belonging to the above species; and there seems little doubt that both Dr. Reuter's and Mr. Uhler's description refer to the same insect. Both their publications bear date 1875, but I give the priority to the first as being the earliest received, at least in this country.

2. **Miris guatemalanus,** n. sp.

Allied to *M. affinis*, but larger; the colour pale ochraceous; antennæ with the basal joint finely but strongly pilose, the second joint with its apex more or less distinctly infuscated. Head obscurely pilose, the central sulcation distinct and narrow, with a longitudinal fuscous fascia on inner side of eyes, and the extreme base also more or less distinctly fuscous. Pronotum coarsely punctate, the lateral margins and a central longitudinal line levigate and pale luteous; a fuscous submarginal fascia on each side, broadest and badly defined near anterior margin; the lateral angles subprominent, subnodulose, and pale luteous. Scutellum somewhat obscurely punctate and pilose, with a central, longitudinal, levigate pale luteous line, moderately widened at base and apex, the basal angles fuscous. Corium densely but finely pilose, the lateral margins broadly pale luteous, widening on each side towards the cuneus, which is also pale luteous. Membrane pale smoky ochraceous. Body beneath and legs pale ochraceous; sternum with a submarginal fuscous line on each side; abdomen with a marginal series of small fuscous spots; intermediate and posterior femora also spotted with fuscous, the last most prominently.

Long. 8–10 millim.

Hab. Guatemala, Quezaltenango, Volcan de Agua (*Champion*).

3. **Miris roseus,** n. sp. (Tab. XXIII. fig. 20.)

Body above purplish red. Antennæ fuscous, the basal joint not prominently pilose. Head with a broad central longitudinal luteous fascia, and a fuscous, but narrower, fascia on inner side of eyes. Pronotum ochraceous, coarsely and darkly punctate, anterior area with two purplish rugosities on each side; the anterior and lateral margins and a central longitudinal line levigate and pale luteous. Scutellum with the basal angles fuscous, and with the apex luteous*. Corium and cuneus with the lateral margins pale luteous; the clavus punctate, with its outer margin luteous. Membrane pale smoky hyaline. Body beneath and legs ochraceous; margins of head and sternum broadly purplish; central base of head and a broad central fascia to sternum dark fuscous; abdomen with a submarginal stigmatal purplish fascia on each side, and the base

* Owing to the scutellum being mutilated by the pin which impales it, a further description is impossible.

narrowly of the same colour. Legs pilose, femora more or less spotted with fuscous; tibiæ with their bases and apices fuscous; tarsi fuscous. Rostrum long, about reaching the second abdominal segment, its apex fuscous.

Long. 7 millim.

Hab. Mexico, Oaxaca (*Deppe, Mus. Berol.*).

CREONTIADES, gen. nov.

Body elongate. Head moderately and obliquely deflexed before eyes, and with a distinct, narrow central longitudinal sulcation; eyes somewhat prominent, and contiguous to the anterior margin of the pronotum; antennæ about as long as the body; basal joint stoutest, considerably longer than the head, and sparingly but prominently hirsute; second joint about twice the length of the first, somewhat slender, slightly curved, and a little incrassated at apex; third joint a little shorter than the second; fourth joint about or less than half the length of the third. Pronotum subtriangular, with a distinct anterior collar, and the anterior margin about half the width of the posterior. Scutellum large, the disk somewhat longitudinally raised, and the lateral margins obliquely rounded. Corium with the costal margins subparallel. Legs long, sparingly hirsute, the tibiæ with long and prominent setæ. Rostrum reaching the posterior coxæ.

The length of the posterior legs and its general superficial appearance give this genus a considerable resemblance to those comprised in the division Phytocaria; but the central sulcation of the head and the insertion of the antennæ well in front of the eyes and at the lateral margins of the head, in my opinion clearly denote its position in the Miraria.

1. **Creontiades rubrinervus.** (*Megacœlum rubrinerve*, Tab. XXIII. fig. 12.)

Megacœlum rubrinerve, Stål, Stett. ent. Zeit. xxiii. p. 321. 250[1].

Hab. Mexico[1] (*coll. Sign.* and *Mus. Holm.*); Guatemala, San Gerónimo, Capetillo, Volcan de Atitlan, and near the city of Guatemala (*Champion*).

Since figuring the above Mexican specimen, which was considerably mutilated, I have been enabled to examine the type (also imperfect), in the collection of Dr. Signoret and to again compare both of these with perfect specimens collected by Mr. Champion.

The legs are concolorous with the body, the posterior femora with their apical halves bright castaneous, and the apices of all the tarsi blackish.

In lettering the Plate I followed Dr. Stål in considering the species as belonging to the genus *Megacœlum*, but on further examination I was compelled to form a new genus for its reception as above.

MINYTUS, gen. nov.

Body subelongate, opaque. Head long, the lateral lobes slightly but angularly produced on each side in short, obtuse spines; central sulcation long and distinct; antennæ not so long as the body, first and second joints very strongly incrassated; first joint pilose, about as long as the head, slightly curved outwardly and narrowed at base; second joint about three times as long as the first, pilose at base, its apex very slightly and globosely thickened; third and fourth joints minute, very slender, and subequal in length. Pronotum with the anterior margin truncate, the posterior margin concavely sinuate before scutellum, and from thence oblique to the lateral angles, the lateral margins concavely sinuate, the lateral angles distinctly produced in obtusely angulated, subprominent spines, the width between which is about twice

that of anterior margin. Scutellum large, slightly tumid, subtriangular, the lateral margins not straight, but convexly narrowing towards apex. Head, pronotum, and scutellum punctate. Corium with the lateral margins slightly and convexly widened towards cuneus, which is again convexly narrowed to its apex. Cuneus with its width at base about equal to its length. Legs spotted and subpunctate. Rostrum passing the posterior coxæ.

1. **Minytus argillaceus,** n. sp. (Tab. XXIV. fig. 1.)

Dull, obscure, brownish ochraceous. Antennæ with the apex of the second and the base of the fourth joint infuscated. Head with the central sulcation somewhat infuscated. Pronotum somewhat coarsely punctate, the lateral margins levigate and pale luteous, but with the apical portion black and the lateral angles of the same colour. Scutellum with a distinct narrow, fuscous, central, longitudinal line. Corium with the disk opaquely darker. Legs ochraceous, thickly spotted with brownish; apices of the tibiæ and tarsi greenish.

Long. 8–9 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

2. **Minytus amplificatus,** n. sp.

Larger and broader than the preceding species, and with the posterior margin of the pronotum much less profoundly concave. Head and pronotum dull, obscure ochraceous, the basal area of the last behind the transverse constriction paler ochraceous. Scutellum and corium dark brownish, the apex of the first and the lateral margins of the last paler; cuneus dark obscure castaneous. Membrane pale fuscous. Legs brownish. Body beneath (carded specimen) dull ochraceous. Antennæ mutilated.

Long. 9 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This description is taken from a single and somewhat mutilated specimen sent home by Mr. Champion.

TRACHELOMIRIS.

Trachelomiris, Reuter, Öfv. Vet.-Ak. Förh. 1875, no. 9, p. 61.

This genus, founded by Dr. Reuter for the reception of a North-American species, and also to include the *Miris scenicus,* Stål, a South-Brazilian species, agrees in all its given diagnostic characters with the species which I here include in it. As I understand it, *Trachelomiris* may be easily recognized (at least from any of the genera of Miraria here enumerated) by the elongated body, the eyes inserted about the middle of the elongated head, the nearly conical pronotum, which is anteriorly deflexed, the antennæ longer than the body, and the long and pilose legs.

A secondary generic character appears to be afforded by a fuscous spot near the lateral angles of the pronotum, which is described as indicative of both Stål's and Reuter's species, and is also found in the one which I here describe.

1. **Trachelomiris oleosus,** n. sp. (Tab. XXIV. fig. 2.)

Body above fuscous, the colour shining and oleaginous. Head with five luteous spots—one on each side of eyes, one between antennal bases, and two contiguous behind eyes; the apex shining black; antennæ fuscous, with the first joint, excepting extreme base, ochraceous, minutely spotted with fuscous. Pronotum somewhat coarsely punctate, the anterior, posterior, and lateral margins, and a central longitudinal line pale luteous; a large, elongated, shining black spot near each lateral angle; the transverse impression at

anterior area sometimes distinctly luteous. Scutellum transversely wrinkled, with the basal angles black; two basal and subangular spots, a central longitudinal line, and apex luteous. Corium with the lateral margins pale luteous; the clavus distinctly punctate; the cuneus pale luteous, with an inner elongate fuscous spot. Membrane pale fuscous. Legs pale reddish ochraceous, the femora thickly spotted with fuscous; apices of the tarsi fuscous. Rostrum pale luteous, its apex pitchy; head beneath and sternum fuscous; apex of head, anterior margin of prosternum, coxæ, trochanters, and abdomen pale luteous.

Long. $5\frac{1}{2}$ to $6\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil, San Gerónimo, near the city (*Champion*); PANAMA, Bugaba (*Champion*).

Obtained by sweeping grasses and other low-growing plants (*Champion*).

XENETUS, gen. nov.

Body elongate, pilose, somewhat shining. Head broad, deflected before the eyes, the central longitudinal sulcation not extending beyond the basal half; eyes large, prominent, slightly directed backwardly, and contiguous to the anterior margin of the pronotum; antennæ not quite so long as the body; basal joint about as long as the head or longer, second joint three times the length of the first, with its apical half more or less incrassated; third and fourth joints slender, the third about half the length, or nearly as long as the second, and more than twice the length of the fourth. Pronotum elongate, subglobose, constricted about the centre; before this constriction the lateral margins are convex, and behind the same they obliquely widen to lateral angles which are non-prominent; posterior margin concavely sinuate at area of scutellum; anterior margin truncate. Scutellum with the basal third depressed, remainder somewhat tumid, the apex distinctly carinate. Corium with the margin concavely sinuate, widening towards cuneus, which is longer than broad. Legs finely, but longly setiform, the tibiæ prominently so. Rostrum just passing the intermediate, or reaching the posterior coxæ.

a. *Basal joint of antennæ about the length of the head; third joint about half the length of the second.*

1. **Xenetus lanuginosus,** n. sp. (Tab. XXIV. fig. 3.)

Body above fuscous and finely pilose. Antennæ with the first joint ochraceous, its base pale luteous and its apex slightly infuscated; second joint ochraceous, its apical half fuscous; third joint very pale fuscous, with the apical half darker and its base very pale; fourth joint fuscous, with the base pale luteous. Pronotum very finely rugulose, the basal margin ochraceous. Scutellum with the apical half more or less obscurely castaneous. Corium with the claval area, a large central patch, and a large irregular apical spot very dark fuscous, the central patch containing a transverse subtriangular ochraceous spot. Cuneus ochraceous, inner base fuscous, inner apical area castaneous. Legs ochraceous, apices of the posterior femora dull castaneous. Body beneath fuscous, with the acetabula apparently ochraceous (*carded specimen*). Rostrum ochraceous, the apical portion pitchy.

Variety (sexual or otherwise?). Pronotum with the disk longitudinally more or less ochraceous, scutellum sometimes wholly ochraceous, corium with the ground-colour either pale fuscous or brownish ochraceous; legs variable in hue, sometimes altogether fuscous.

Note. In this apparently variable species the size and the transverse subtriangular pale central spot to the corium seem to be indicative of its identity in all its protean forms.

Long. 7–8 millim.

Hab. GUATEMALA, San Isidro, Zapote, San Juan in Vera Paz (*Champion*).

2. **Xenetus ambiguus,** n. sp. or var.?

Constantly larger than the preceding species, and paler in hue than typical forms of that species. Corium with

no trace of the dark claval area; central dark patch either entirely obsolete or only faintly indicated, with its central transverse spot minute.

Long. 9 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

b. *Basal joint of antennæ longer than head; third joint almost as long as the second.*

3. **Xenetus bracteatus,** n. sp. (Tab. XXIV. fig. 4.)

Head brownish ochraceous, the eyes fuscous. Antennæ ochraceous, basal joint sparingly and minutely spotted with fuscous, second joint with the apex fuscous, apical joint (excluding base and apex) fuscous. Pronotum ochraceous, the lateral margins fuscous, most broadly so at lateral angles. Scutellum ochraceous, the basal angles fuscous, the apical third brownish or castaneous. Corium reddish brown, finely and palely pilose, with a central, irregular, transverse ochraceous spot on lateral margins and a transverse linear dark spot at base of cuneus, which is ochraceous, with the apical half reddish, or altogether pale reddish. Legs ochraceous, pilose, sparingly and minutely spotted with fuscous, apices of posterior femora broadly reddish brown. Sternum more or less spotted with fuscous (*carded specimen*). Rostrum ochraceous, with the apex pitchy and reaching the posterior coxæ. Cellular veins of the membrane reddish.

Long. $8\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

4. **Xenetus chryselectrus,** n. sp.

Allied to the preceding species, but smaller, golden ochraceous above and unicolorous. Pronotum with the lateral margins narrowly and obscurely fuscous. Scutellum with the extreme apex black. Corium finely and thickly pubescent, with a transverse, minute, dark linear spot at base of cuneus, which is more or less concolorous with corium. Other characters as in *X. bracteatus*, but the apex of the second joint of antennæ more distinctly clavate, the pronotum less elongate, &c.

Long. 7 millim.

Hab. GUATEMALA, Pantaleon (*Champion*).

ZACORUS, gen. nov.

Allied to *Herdonius*, Stål, but differing from that genus in not having the antennæ as long as the body, and the scutellum spined on disk and not at apex. Body elongate, and moderately pilose. Head large, subtriangular, anteriorly obliquely deflexed, lateral margins channelled and subfoliaceous, eyes contiguous to the anterior margin of the pronotum, and with a narrow central longitudinal sulcation. Antennæ with the basal joint not quite as long as the head and moderately robust; second joint considerably more than twice the length of the first, its apical half globosely incrassated but narrowing at apex; third and fourth joints slender, the third half as long again as the fourth. Pronotum deeply constricted and narrowed at centre; the anterior portion obliquely deflexed and narrowed from anterior margin to constriction, with its surface irregular; the posterior portion or lobe convexly globose and widening to the lateral angles; the posterior margin concavely sinuate before the scutellum, the anterior margin subtruncate or very slightly emarginate. Scutellum obliquely depressed at the base, armed about the centre with a long suberect spine, from which there is a distinct central carination to the apex. Corium with the lateral margins concave. Cuneus longer than broad, its outer margin convex. Legs finely but prominently setose. Rostrum about reaching to the intermediate coxæ.

1. **Zacorus staphyliniformis,** n. sp. (Tab. XXIV. fig. 5.)

Head and pronotum black, with the posterior margin of the last ochraceous. Antennæ dull brownish; first joint with the basal portion black and its extreme base ochraceous, the third with the base ochraceous. Anterior lobe of pronotum with an obscure central longitudinal carination, on each side of which are two

oblique linear incisions, the two posterior almost united by two rounded foveæ, the posterior lobe somewhat thickly clothed with ochraceous pilosity. Scutellum with the basal area black, remainder brownish, clothed with long ochraceous hairs, and with the central spine pale ochraceous, suberect, and very slightly directed forwardly. Corium dark chocolate-brown, palely pilose; extreme outer basal margin ochraceous, with a central transverse greyish spot followed by a patch of richer dark chocolate-brown; the apex broadly black and opaque, with a small greyish spot near inner base of membrane. Cuneus greyish white, more or less shaded with pale fuscous. Membrane very pale fuscous, its outer margin paler. Legs very dark chocolate-brown, clothed with long greyish setæ or hairs; extreme apices of femora and base of tibiæ pale luteous; apical halves of tibiæ more or less ochraceous. Body beneath (*imperfectly examined owing to the specimen being carded*) dark shining fuscous; marginal and basal fasciæ to head, acetabula, and two marginal spots to abdomen (one near centre and one about apex) ochraceous. Rostrum brownish ochraceous, with the apex pitchy.

Long. 10 millim.

Hab. GUATEMALA, Senahu (*Champion*).

One specimen only of this extremely interesting and, in many respects, remarkable insect has been obtained.

2. **Zacorus curvicornis,** n. sp.

Closely allied to the preceding species in markings and coloration, but differing by its smaller size, the scutellal spine strongly curved backwards, the anterior lobe of the pronotum quite distinct, having an interior transverse globose ridge with a distinct obtuse spine near each anterior angle, and wanting the incised markings of the preceding species. The antennæ are also much paler in hue, the anterior portion of the head more or less brownish ochraceous; the legs pale ochraceous, femora more or less irregularly suffused with brownish, and tibiæ (excluding base and apical half) also brownish.

Long. 6–7 millim.

Hab. PANAMA, Bugaba (*Champion*).

ZOSIPPUS, gen. nov.

Allied to *Zacorus*, but differing in the pronotum, which is constricted nearer the anterior margin, and has both lobes semiglobose; its posterior margin is also truncate, and the anterior margin slightly convex. The head is somewhat vertically deflected beyond the eyes; antennæ with the first joint about the length of the head, second joint about or a little more than twice the length of the first, its apical portion only moderately incrassated (remaining joints mutilated). Scutellum much as in the preceding genus, but with a broad, central, conical obtuse spine. Other characters generally as in *Zacorus*.

1. **Zosippus inhonestus,** n. sp. (Tab. XXIV. fig. 6.)

Subelongate, finely and palely pilose. Head and pronotum black, the posterior margin of the last narrowly and obscurely ochraceous. Head with the antennal bases and lateral margins in front of eyes ochraceous; antennæ fuscous, basal portion of first joint distinctly luteous (third and fourth joints wanting). Scutellum dark shining fuscous. Corium fuscous, with a central transverse greyish spot followed by a very dark fuscous patch and a large apical ochraceous spot; a small rounded ochraceous spot at inner base of membrane, and the inner claval area at margins of scutellum very dark fuscous. Cuneus fuscous, thickly covered with ochraceous pile. Membrane obscure fuscous. Legs very dark castaneous, clothed with long pale setæ or hairs. Body beneath dark fuscous, the coxæ ochraceous (*imperfectly examined owing to the specimen being carded*).

Long. 5 millim.

Hab. PANAMA, Tolé (*Champion*).

LYGDUS, gen. nov.

Body depresssed and subovate. Head porrect, slightly but obliquely deflexed before eyes, and narrowly and longitudinally sulcate; antennæ very thickly and strongly hirsute, the basal joint stoutest, much longer than the head, the second about half as long again as the first, third and fourth slender. Eyes prominent and distinctly separated from the anterior margin of the pronotum. Pronotum with the lateral margins suberectly ampliated, somewhat lobately ampliated near anterior margin; a distinct anterior collar, the anterior margin about half the width of the posterior, which is truncate at base of scutellum, and then oblique to lateral angles, which are non-prominent. Scutellum subtriangular and moderately convex. Corium with the costal margins sinuated near the base, and then convexly widened, the extreme margin distinctly compressed and ampliated. Cuneus longer than broad, the notch profound. Legs long and thickly hirsute. Rostrum reaching the intermediate coxæ.

The general appearance and colour of this extraordinary genus is typical of the Lygæidæ rather than of the Capsidæ.

1. **Lygdus simulans,** n. sp. (Tab. XXIV. fig. 16.)

Body above black; lateral margins of the pronotum, costal margins and the basal half of the corium, apical half of the clavus excluding the apex, and cuneus ochraceous; body beneath and legs black.
Long. 10 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Division **VALDASARIA.**

In this division I propose the arrangement of a series of genera in which, like those of the preceding division, the head is always, though frequently obscurely, sulcated, and sometimes more correctly to be described as excavated; the antennæ are inserted well in front, but on a level with the inner margin of the eyes.

The species thus comprised are of a more robust character than those of the Miraria, and the colouring is bright and handsome, thus approximating towards the next division.

PIASUS, gen. nov.

Body elongate, widest at base of pronotum. Head moderately long and porrect, somewhat deflexed towards apex and with a distinct and somewhat broad central longitudinal sulcation on disk, which is distinctly moderately gibbous; eyes large and prominent, slightly directed backwards and well separated from the anterior margin of pronotum. Antennæ with the basal joint stoutest and much longer than the head; second joint about half as long again as the first, but more slender, gradually thickened towards apex and finely pilose; third and fourth joints short and slender. Pronotum with the posterior margin slightly convex and more than twice as wide as the anterior margin, which is distinctly raised, the lateral margins sinuate; the lateral angles subprominent; transversely constricted before the middle, between which constriction and the anterior margin it is distinctly nodulose, and between the same and the posterior margin it is coarsely punctate. Scutellum subconvex and coarsely punctate. Corium with the lateral margins subparallel. Cuneus a little longer than broad. Rostrum reaching the intermediate coxæ.

1. **Piasus illuminatus,** n. sp. (Tab. XXIV. fig. 17.)

Pale ochraceous, the eyes, apex of head, two discal longitudinal but broken fasciæ and the lateral angles to pronotum, basal angles and a central broad longitudinal fascia to scutellum, inner and outer claval

margins, a broad central macular fascia and lateral margins (gradually widening from base) to corium, and disk of cuneus, either dark brown or blackish. Antennæ black, the base of first joint and the apex of the second ochraceous, the second obscurely annulated with castaneous near base. Legs pale ochraceous, anterior femora longitudinally streaked above and the intermediate and posterior femora somewhat obscurely annulated with fuscous near apices; tibiæ with basal, central, and apical fuscous annulations; tarsi fuscous, the claws ochraceous. Membrane pale fuscous, the cellular areas and a subapical spot and apical margins dark fuscous. Body beneath apparently (*carded specimen*) ochraceous with some brownish markings.

Long. 7 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

VALDASUS.

Valdasus, Stål, Rio Jan. Hem. i. p. 56 (1858); Walk. Cat. Het. vi. p. 47 (1873).

This peculiar and well-marked genus is easily recognized by the vertically deflexed head in front of the eyes, which are very prominent, obliquely suberect, and contiguous to the anterior margin of the pronotum.

Valdasus appears to be quite confined to the Neotropical Region. Only two species have hitherto been described, one from South Brazil and the other from Mexico. Of these the last is found in our fauna, and seven other new species are here described. There is therefore every probability that this will eventually be found to be a most extensive genus.

These insects were found by Mr. Champion on black fungi (to which they assimilated in colour) attached to fallen trees. They were of particularly active habits, both flying and running, thus making their capture somewhat difficult.

1. **Valdasus famularis.** (Tab. XXIV. fig. 7.)

Valdasus famularis, Stål, Stett. ent. Zeit. xxiii. p. 321. 251 [1].

Hab. MEXICO [1].

The type in the collection of Dr. Signoret is here figured.

2. **Valdasus stellatus,** n. sp.

Closely allied to *V. famularis*, but differing by its darker colour above; pronotum with three linear, longitudinal, pale ochraceous lines, one central and two submarginal; femora much darker than in Stål's species, and not doubly annulated, but with a single upper ochraceous spot. It structurally differs by having the lateral pronotal angles distinctly subnodulose, and narrowly ochraceous at their apices.

Long. 6–7 millim.

Hab. GUATEMALA, San Juan in Vera Paz and Cubilguitz (*Champion*).

Two specimens, one from each of the above localities, were collected by Mr. Champion, and these vary in size as above described.

3. **Valdasus marginicollis,** n. sp.

Body above black; lateral margins of the pronotum, two central spots near base of scutellum and apex of same, a narrow linear fascia commencing at basal margin of corium extending through about half its

length and terminating in a club-shaped spot, claval apices, and apex of corium (margining base of cuneus) ochraceous. Eyes greyish. Antennæ with the first and second joints black, third and fourth fuscous, base of the third broadly pale luteous. Membrane fuscous, its apical half paler. Body beneath and legs black; underside of head and coxæ pale luteous, anterior and lateral margins of prosternum pale ochraceous. Rostrum black.

The upper surface is thickly and coarsely punctate; the pronotum has the lateral margins distantly channelled and very coarsely punctate, the anterior gibbous portion being centrally sulcated.

Long. 5–8 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet, Bugaba (*Champion*).

4. **Valdasus funebris,** n. sp. (Tab. XXIV. fig. 8.)

Body above dark fuscous; head and eyes obscure luteous, irregularly spotted and shaded with brownish; posterior margin of pronotum, two small spots near base of scutellum and apex of same, and four spots situate two on each claval margin near apex, obscure dull luteous; apex of corium margining the cuneus, and inner margin of cuneus ochraceous, the base of the last somewhat reddish; membrane fuscous, its apical margins somewhat paler; the corium is narrowly at inner margin and broadly at apex of claval margins dark velvety fuscous; legs dull obscure luteous, femora more or less distinctly biannulated with fuscous, the tibiæ somewhat pale fuscous; antennæ fuscous, apex of second joint luteous. Body beneath (*imperfectly examined owing to the specimen being carded*) fuscous; head, coxæ, and abdomen luteous, the last with a submarginal longitudinal series of fuscous spots.

The body is broad, and, excluding head and posterior margin of pronotum, very coarsely punctate, the lateral angles of the pronotum are non-prominent but obtusely acute, and the anterior lobe or gibbous portion is profoundly sulcated.

Long. $6\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

A single specimen only of this species was found by Mr. Champion.

5. **Valdasus erebeus,** n. sp.

Body above black; head either black with the eyes testaceous, or pale fuscous with the eyes dark fuscous; apex of scutellum, a very small spot at basal margin, and a large subquadrate spot about centre of lateral margin, and inner apical margins (narrowly) of corium luteous; near and following claval apex, on each side of corium, is a large dark velvety spot; cuneus either testaceous with the basal margin luteous, or luteous with the disk testaceous, its apex fuscous; femora luteous, biannulated with fuscous, their apices and the tibiæ and tarsi more or less fuscous; antennæ pale fuscous, base of first and apex of second joint pale luteous. Body beneath black; head, coxæ, and about four annulating fasciæ to abdomen (apparently fused on disk) luteous.

Pronotum and corium coarsely punctate, the scutellum subglobose and finely punctate; lateral pronotal angles rounded; corium deeply sinuate near centre.

Long. 5 millim.

Hab. PANAMA, Bugaba (*Champion*).

This species is allied to *V. funebris*, but differs by its smaller size, different markings, pronotal angles rounded and not obtusely acute, anterior area of pronotum not profoundly sulcated, &c.

6. **Valdasus cerbereus,** n. sp.

Allied to the preceding species, but smaller and paler, being dark castaneous in hue; antennæ very long and slender; spots to scutellum and corium very obscure or almost entirely obsolete, the subquadrate central

marginal spot to corium completely absent. Clavus with a short linear ochraceous spot on each side near apex; cuneus testaceous or castaneous, the base transversely luteous; membrane smoky hyaline or very pale fuscous; clavus with two oblong spots (one on each side of central suture), and corium with a large irregular apical spot dark velvety brown. Body beneath much as in preceding species, but paler.

V. cerbereus also differs from *V. erebeus* in having the pronotal angles distinctly subnodulose, the corium and pronotum less coarsely punctate, the scutellum not globose, but with a distinct and broad central longitudinal carination, &c.

Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

7. **Valdasus stygius,** n. sp. (Tab. XXIV. fig. 9.)

Body above dark castaneous; head dull ochraceous with two small central fuscous spots; antennæ with the first and second joints pale castaneous, the base of the first and the apex of the second pale luteous, third and fourth very pale fuscous; apex of scutellum, a very small spot at marginal base, and a large subquadrate spot about centre of lateral margin of corium, a small spot on each side of apex of clavus, and apical margin of corium greyish white; cuneus greyish white with the apex fuscous; membrane pale fuscous with some obscure greyish markings; femora luteous, irregularly annulated with castaneous; tibiæ and tarsi castaneous. Body beneath (*carded specimen*) with the head, coxæ, posterior margin of metasternum, and disk of abdomen (imperfectly seen) luteous or ochraceous.

This species is more or less distinctly pilose; the pronotum is thickly and coarsely punctate, very broad posteriorly, the lateral angles obtusely rounded and subnodulose; the scutellum is transversely wrinkled and punctate, with its base depressed; the corium is sparingly and finely punctate.

Long. 5 millim.

Hab. PANAMA, Bugaba (*Champion*).

The great width of the pronotum at base, irrespective of general colour and markings, at once separates this from the two preceding species.

8. **Valdasus rugosus,** n. sp. (Tab. XXIV. fig. 10.)

Above shining black and extremely rugose; antennæ fuscous, the apex of the second joint luteous; a small spot at basal margin of corium, a linear spot on each side of clavus near apex, and basal margin of cuneus obsure greyish; membrane fuscous, basal cellular areas blackish; basal angles of scutellum and an elongated spot on each side of apical claval suture deep velvety black; legs castaneous, femora with the base and a subapical annulation luteous, apices of tarsi luteous. Body beneath concolorous, posterior coxæ (anterior and intermediate coxæ unexamined owing to specimen being carded) luteous.

Pronotum with the anterior area globosely nodulate and profoundly sulcate, the base with two central contiguous smaller nodulations, the lateral angles obtusely rounded; scutellum with a central basal foveate impression, the apical portion gibbous, posteriorly deflexed and centrally carinate, corium obliquely and irregularly rugosely striate.

Long. 6 millim.

Hab. GUATEMALA, Senahu (*Champion*).

VANNIUS, gen. nov.

Allied to *Valdasus*. Head slightly and conically produced in front of the eyes, and then vertically deflexed, and with a slender central longitudinal sulcation; eyes contiguous to the anterior margin of the pronotum, but less prominent than in *Valdasus*. Antennæ with the basal joint stout and incrassated, not quite the length of the head; second, third, and fourth joints slender; the second twice the length of the first, and subequal in length to the third. Pronotum subtriangular, with an anterior transverse constriction, the

posterior margin slightly, but truncately, ampliated at base of scutellum, and with a bisinuate transverse carination between and a little in front of the lateral angles. Scutellum with a central longitudinal carination. Corium with the lateral margins subparallel; cuneus longer than broad. Rostrum mutilated.

1. **Vannius rubrovittatus,** n. sp. (Tab. XXIV. fig. 11.)

Body above very pale brownish ochraceous; basal joint of antennæ, inner area of eyes, lateral margins of the pronotum, scutellum (excluding basal angles), a subclaval fascia, a curved transverse fascia on apical third of corium, and a large quadrate spot at base of cuneus rosy red. Legs pale obscure ochraceous, the apices of the femora somewhat darker. Abdomen beneath more or less fuscous; sternum irregularly shaded with reddish or fuscous. Second, third, and fourth joints of the antennæ obscure ochraceous, second and third with their apices greyish white. Corium, especially the costal margin, distinctly pilose. Long. $3\frac{1}{2}$–4 millim.

Hab. GUATEMALA, Las Mercedes, Cerro Zunil (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Found by beating the with red leaves of the banana, *Musa*, sp. (*Champion*).

MONALONION.

Monalonion, Herrich-Schäffer, Wanz. Ins. ix. p. 168 (1853); Walk. Cat. Het. vi. p. 47 (1873).

This genus possesses many well-marked characteristics to prevent it being confused with any of the other genera here enumerated. The head is very broad and anteriorly deflexed, the sulcation is broad and subfoveate, the basal joint of antennæ very short and stout, remaining joints much more slender, gradually weakening, and distinctly and strongly pilose. The cuneus is much longer than broad.

Monalonion is found throughout the length of the Neotropical Region, to which it appears to be confined.

Frequently found in the withered leaves of the banana, *Musa*, sp. (*Champion*).

a. *Posterior tibiæ straight.*

1. **Monalonion annulipes.** (Tab. XXIII. fig. 25, var.)

Monalonion annulipes, Sign. Ann. Soc. Ent. de Fr. sér. 3, vol. vi. p. 500[1].

Hab. MEXICO[1] (*Deppe, Mus. Berol.*); GUATEMALA, San Gerónimo (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

With the series of specimens now before me, including a typical specimen sent by Dr. Signoret, I cannot but consider this to be a most variable and protean species. The head and antennæ are always black, the last having the base, or sometimes nearly the whole, of the first joint more or less yellowish; the pronotum varies from black with the margins brownish (as described by Signoret) to either wholly black or completely ochraceous; the corium also varies in a similar manner. The character, however, which is constant, and in my view always indicates this protean species, is the annulated posterior femora.

A Mexican variety belonging to the Berlin Museum is here figured.

2. **Monalonion versicolor,** n. sp. (Tab. XXIV. fig. 12.)

Head and antennæ shining black, the antennæ pilose, the head obscurely marked with castaneous near base; pronotum ochraceous, the whole of the anterior area and the lateral margins narrowly black, the ochraceous area containing a more or less arcuate castaneous fascia; scutellum ochraceous, its base opaquely greyish; corium pale reddish castaneous, the costal margins and a triangular spot in front of inner apical angles luteous, inner claval margins somewhat darker; cuneus reddish, the apex infuscated; membrane very pale fuscous and semihyaline, the cellular veins reddish; anterior legs black, intermediate and posterior legs ochraceous, the femora streaked with fuscous above, and the apices of the tarsi black. Body beneath *apparently* (carded specimen) with the head and sternum blackish, the abdomen ochraceous.

Long. 8 millim.

Hab. GUATEMALA, Las Mercedes (*Champion*).

3. **Monalonion hilaratum,** n. sp. (Tab. XXIV. fig. 13.)

Head black, with the base obscurely ochraceous; antennæ black, pilose, first joint with base and apex dull ochraceous, fourth joint and apex of third more or less fuscous; pronotum ochraceous, somewhat darker near lateral angles; scutellum reddish ochraceous; corium pale fuscous, the costal margins narrowly, at base broadly, ochraceous; cuneus bright reddish; membrane pale fuscous, the cellular veins reddish; legs ochraceous; tarsi and bases of posterior femora dark fuscous. Body beneath *apparently* (carded specimen) more or less reddish ochraceous.

Long. 9 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

b. *Posterior tibiæ curved.*

4. **Monalonion atratum,** n. sp. (Tab. XXIV. fig. 14.)

Head, antennæ, and pronotum dark shining black, the antennæ strongly pilose; eyes luteous; scutellum and corium dark shining fuscous, the first with its apex somewhat paler, the second with the costal margin (particularly broad at base) luteous; membrane pale fuscous; legs black and strongly pilose, the anterior and intermediate tibiæ very broadly annulated with luteous. Body beneath *apparently* (carded specimen) shining black; abdomen above dull reddish.

Long. 10 millim.

Hab. PANAMA, Bugaba (*Champion*).

c. *Pronotum excavated at base.*

5. **Monalonion dissimulatum,** n. sp. (Tab. XXIV. fig. 15.)

Body above ochraceous; head, antennæ, anterior constricted area of pronotum, apex of scutellum, and a broad transverse fascia at apex of corium black; base of first joint of antennæ ochraceous; membrane pale ochraceous and semihyaline, the margins narrowly, and the apex broadly, fuscous; legs ochraceous; the tarsi, bases of posterior femora, and posterior tibiæ (excluding base) black. Body beneath with the sternum ochraceous; the head, anterior margin of prosternum, acetabula, and coxæ black; abdomen mutilated.

Pronotum ovately excavated at base.

Long. 11 millim.

Hab. GUATEMALA, San Isidro (*Champion*).

ORASUS, gen. nov.

Body elongate. Head large, not vertically deflexed, the vertex somewhat triangularly raised, with a small and narrow longitudinal sulcation; the lateral and basal margins are broadly obliquely deflexed; eyes prominent, slightly directed backwards, and contiguous to the anterior margin of the pronotum. Antennæ with the basal joint not quite so long as the head, incrassated, but narrowed and constricted at base; second joint more than twice as long as the first, and moderately robust; third joint about two thirds the length of the second, and considerably more slender; fourth mutilated. Pronotum subquadrate, the posterior margin much broader than the anterior, and truncate, but oblique at lateral angles, which are subacute, lateral margins slightly concave; a transverse constriction before middle enclosing an anterior area, which is prominently nodulose. Scutellum subtriangular, its apex more or less depressed. Corum with the lateral margins slightly sinuate near base, and then concavely ampliated towards apex. Cuneus a little longer than broad. Rostrum reaching the intermediate coxæ.

1. **Orasus robustus,** n. sp. (Tab. XXIII. fig. 13.)

Head black, finely pilose, slightly castaneous at inner margin of eyes; antennæ black, finely pilose, basal joint with a few long hairs, third joint paler and brownish, fourth joint mutilated. Pronotum dull reddish, with some obscure pitchy suffusion, finely pilose, and faintly transversely striate. Scutellum pitchy red, the lateral margins pale, and finely transversely striate. Corium pale fuscous and finely pilose; the lateral margins (widening from base) dull, pale ochraceous, the extreme edge fuscous; cuneus reddish, the base ochraceous, and apex pitchy. Membrane very pale fuscous and semihyaline. Anterior and intermediate legs pale castaneous; the tibiæ prominently setaceous, their apices infuscated; tarsi with their apices pitchy (posterior legs mutilated). Body beneath and rostrum pale castaneous; coxæ and basal disk of abdomen pale ochraceous.

Long. $5\frac{1}{2}$ millim.

Hab. Mexico (*Sallé, Mus. Holm.*).

SYSINAS, gen. nov.

Body elongate and oblong, more or less shining, and sparingly pilose. Head broad at the base, and convexly tumid for about a third of its length, after which it is vertically deflexed, with a broad central sulcation on vertex; eyes prominent, subsessile, slightly directed backwards, and contiguous to the anterior pronotal collar. Antennæ with the joints gradually decreasing in substance, the first about the length of the head, and more than half the length of the second. Pronotum elongate and anteriorly attenuated, with a distinct anterior collar, behind which is a transverse constriction enclosing a convexly tumid area, lateral angles obtusely rounded; posterior margin truncate, and about twice the width of anterior margin. Scutellum with a central longitudinal sulcation, on each side of and beyond which the surface is tumid, forming a broadly V-shaped carination. Corium finely pilose, the costal margin reflexed. Legs finely and obscurely pilose. Rostrum not quite or about reaching the intermediate coxæ.

1. **Sysinas linearis.** (Tab. XXIII. fig. 21.)

Head and anterior area of pronotum luteous, posterior area of pronotum reddish; antennæ, eyes, a central longitudinal fascia to head and pronotum, scutellum, corium, and body beneath black; lateral margins of corium and cuneus sometimes narrowly luteous (in some specimens concolorous); membrane pale fuscous; head beneath, base of the second joint of the antennæ, rostrum, coxæ, and femora luteous, apices of femora above, and the tibiæ and tarsi dark fuscous.

In a female example, in which the lateral margins of the corium and cuneus are luteous (as in the specimen figured) the abdomen beneath is also luteous.

The posterior area of the pronotum and the corium is finely but distinctly punctate, the posterior tibiæ finely setose.

Long. 6 millim.

Hab. Mexico (*Deppe, Mus. Berol.*).

2. **Sysinas audens,** n. sp. (Tab. XXIV. fig. 25.)

Head, antennæ, and anterior area of pronotum black; basal area of pronotum and bases of scutellum and corium rosy red; scutellum and corium black, the last with the lateral margins luteous; cuneus luteous, its inner half and apex black; membrane blackish, the apical margin pale; head beneath, basal joint of rostrum, pro- and mesosternums, coxæ, and legs luteous; apical portion of rostrum and apices of tibiæ (posterior tibiæ broadly) and the tarsi fuscous; a marginal anterior spot on each side of the prosternum (behind the eyes), two discal spots to mesosternum, metasternum, and abdomen blackish.

The eyes in this species are very large, the pronotum and corium punctate as in the preceding species, and the corium is finely and somewhat indistinctly pilose.

Long. $5\frac{1}{2}$–6 millim.

Hab. PANAMA, San Lorenzo (*Champion*).

Found within the flowers of *Arums* growing in the virgin forest (*Champion*).

3. **Sysinas clarus,** n. sp.

Head, pronotum, sternum, rostrum, and legs luteous; antennæ, scutellum, corium, eyes, apical portion of rostrum, an upper streak to anterior femora, a subapical annulation to intermediate and posterior femora, basal and median annulations to tibiæ (those of the anterior tibiæ indistinct) and tarsi bluish black; base of the first joint of antennæ luteous; membrane pale hyaline, with the cellular areas blackish.

The pronotum and corium are much more indistinctly punctate than in the preceding species.

Long. $4\frac{1}{2}$–5 millim.

Hab. PANAMA, Matachin (*Dr. Thieme, coll. Oberthür*).

4. **Sysinas centralis,** n. sp. (Tab. XXV. fig. 7.)

Head, pronotum, sternum, and legs luteous; eyes, antennæ, a broad central longitudinal fascia on disk and the apex of the head, anterior margin and a broad central fascia (narrowing anteriorly) to pronotum, scutellum, corium, membrane, and abdomen beneath blackish; lateral margins of corium and cuneus luteous; upper streaks to anterior and intermediate femora, apices of tibiæ, and tarsi fuscous.

Posterior area of pronotum and corium finely but distinctly punctate, the corium very finely pilose.

Long. 4 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

5. **Sysinas floridulus,** n. sp. (Tab. XXIV. fig. 24.)

Reddish ochraceous; head and subanterior margin to pronotum luteous; first and second joints of antennæ, eyes, scutellum, a broad central fascia occupying inner halves of corium, membrane, and apices of tibiæ (often concolorous) dark fuscous or black; base of first joint and the third and fourth joints of antennæ luteous; lateral margins of corium sometimes very narrowly and indistinctly luteous; vertex of head sometimes infuscated; apical margin of membrane pale hyaline.

Var. (probably sexual). Pronotum wholly luteous, with a broad central transverse fuscous fascia.

Pronotum and corium finely but distinctly punctate, the clavus somewhat coarsely punctate.

Long. $4\frac{1}{2}$–$5\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Found within the flowers of *Arums* growing in the virgin forest (*Champion*).

ZOPYRUS, gen. nov.

Body oblong and depressed. Head anteriorly deflexed, obscurely and broadly sulcated on vertex; the eyes prominent and somewhat upwardly directed. Antennæ inserted well in front of the eyes, with the first

and second joints incrassated and very strongly pilose; the first about as long as the head and attenuated at base, the second nearly twice as long as the first; third and fourth slender and finely pilose. Pronotum coarsely punctate; the anterior margin about half the width of posterior, with a narrow central longitudinal carination, and with two deep transverse foveæ a little before anterior margin. Scutellum with a narrow central longitudinal carination, on each side of which the surface is deflected and transversely striate. Corium thickly punctate, slightly widening towards cuneus, which is longer than broad and coarsely punctate. Tibiæ very finely setose. Rostrum reaching the posterior coxæ.

1. **Zopyrus rubromaculatus,** n. sp. (Tab. XXV. fig. 8.)

Black, a broad central fascia posteriorly angulated, and lateral margins (excluding angles) of pronotum and prosternum sanguineous; posterior margins of eyes reddish ochraceous. Femora either luteous with their apices black or with the anterior and intermediate femora wholly black; membrane with the apical margin and a small spot near the apex of cuneus greyish white.

Long. 6–7 millim.

Hab. GUATEMALA, Quiche Mountains, Totonicapam (*Champion*).

2. **Zopyrus luteofasciatus,** n. sp. (Tab. XXV. fig. 9.)

Black; lateral margins and a central fascia to pronotum, central fascia to scutellum, base of corium (narrowly), and sternum luteous; abdomen sanguineous, its apex black, and the posterior segmental margins ochraceous; coxæ black, their bases somewhat luteous; membrane pale fuscous and at apex of cuneus narrowly greyish white; posterior femora luteous near base; rostrum dull ochraceous, the base and apex black.

Long. 7 millim.

Hab. COSTA RICA, Cache (*Rogers*).

ADMETUS, gen. nov.

Allied to *Zopyrus*, but differing by the head being more suddenly and vertically deflexed, the two basal joints of the antennæ less incrassated; the anterior area of the pronotum somewhat raised and not foveate, but obtusely and somewhat obsoletely bituberculate, the posterior angular margins oblique and the anterior margin wider; the lateral margin of the corium not widened but subparallel; rostrum reaching the intermediate coxæ.

1. **Admetus fimbriatus,** n. sp. (Tab. XXV. fig. 10.)

Black; lateral margins of pronotum, and anterior and lateral margins of prosternum reddish ochraceous; base of first joint of antennæ, eyes, coxæ, and basal halves of femora luteous.

The disk of the pronotum is coarsely punctate and rugulose, the margins more sparingly punctate, the extreme anterior lateral margins are luteous and somewhat laminate and impunctate; the corium is finely, palely, and densely pilose.

Long. 5 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

OFELLUS, gen. nov.

Elongate and subdepressed. Head with a broad central sulcation vertically deflexed from the region of the eyes, which are prominent contiguous to the anterior margin of the pronotum, and somewhat directed upwards. Antennæ with the first and second joints incrassated; the first about as long as the head, and half as long as the second, which is narrower at the base than at the apex; third and fourth joints

slender, the third almost twice as long as the fourth. Pronotum punctate, with the anterior margin convexly rounded and about half as broad as the posterior, which is truncate, but oblique towards the lateral angles, which are rounded and non-prominent; anterior area somewhat gibbous, with a raised central carination and two transverse incisions. Scutellum with a central longitudinal incision. Corium obscurely punctate, the lateral margins subparallel. Cuneus longer than broad. Membrane mutilated.

1. **Ofellus præstans,** n. sp. (Tab. XXV. fig. 11.)

Tawny brown and finely pilose, the apical half of the corium somewhat paler. A large subquadrate spot at base of pronotum and abdomen beneath pale sanguineous. Eyes black. Membrane, tarsi, apex of second and third and fourth joints of antennæ fuscous.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Division **LOPARIA.**

Loparia, Reuter, Bih. Vet.-Ak. Handl. iii: 1, p. 6 (1875); Öfv. Vet.-Ak. Förh. 1875, no. 9, p. 63.

The characters relied upon by Dr. Reuter for the maintenance of this division are the following:—"Caput semper verticale, vertice lato et genis altis, antennæ autem sæpe in speciebus Americanis ad oculorum marginem interiorem insertæ. Pronotum lateribus a latere visis saltem acutis, apice strictura apicali bene discreta vel saltem margine apicali reflexo. Hemelytra furca cubiti semper discreta, cuneo elongato-triangulari. Alæ hamo nullo. Arolia divaricata, magna. Species perplures rufo-variegatæ."

RESTHENIA.

Resthenia, Spinola, Ess. Hém. p. 184 (1840); A. & S. Hist. des Hém. p. 280 (1843).

This genus consists of a number of well-marked and easily recognized species, which the sectional characters here used will better assist to elucidate than any attempt at an abstract diagnosis.

Resthenia is quite confined to the Nearctic and Neotropical Regions, and almost exclusively to the warmer portions of those regions.

Found resting upon leaves in the forest (*Champion*).

A. *Lateral margins of the pronotum acute, anteriorly subreflected. Rostrum usually not quite reaching the intermediate coxæ, basal joint generally slightly passing base of head. Tibiæ densely pilose.* Subg. CALLICHILA, Reut.

1. **Resthenia plagigera.** (Tab. XXIV. fig. 18.)

Resthenia plagigera, Stål, Stett. ent. Zeit. xxiii. p. 316. 233[1].

Hab. MEXICO [1] (*coll. Sign.*); BRITISH HONDURAS, river Sarstoon (*Blancaneau*); GUATEMALA, Panima, Sinanja (*Champion*).

In this species the scutellum possesses a basal, central, subtriangular black spot, a character not mentioned by Stål in his diagnosis.

A Guatemalan specimen is here figured.

2. **Resthenia montana,** n. sp. (Tab. XXV. fig. 1.)

Head, with the vertex, reddish ochraceous, with a narrow waved black line between the eyes, which are pale ochraceous, the apex red with a central black line; pronotum reddish, with the anterior collar (excepting angles) and two large contiguous spots on disk black; scutellum, corium, membrane, legs, rostrum, and antennæ black; the femora more or less obscure, castaneous towards base, and the base of the first joint of the antennæ ochraceous. Body beneath reddish; prosternum with a large black spot on each side, and the abdominal segmental incisures margined with ochraceous.

Long. $10\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

3. **Resthenia picticollis.** (Tab. XXII. fig. 2.)

Resthenia picticollis, Stål, Stett. ent. Zeit. xxiii. p. 317. 235 [1].

Hab. MEXICO [1].

A typical specimen in the Stockholm Museum is here figured.

4. **Resthenia pullata.** (*Resthenia candens*, Tab. XXII. fig. 3.)

Phytocoris pullatus, Burm. Handb. Ent. ii. 1. p. 271 [1]?

Reddish ochraceous; antennæ, eyes, two discal spots to pronotum, corium, legs, apical portion of rostrum, two large central spots to mesosternum, coxæ, and apical third of abdomen more or less dark fuscous; membrane fuscous. Antennæ shortly but thickly pilose, with the extreme base of the first joint ochraceous.

Var. Without the dark spots to mesosternum, and the coxæ concolorous with the body.

Long. 12–14 millim.

Hab. MEXICO, Oaxaca [1] (*Deppe, Mus. Berol.*); GUATEMALA, Zapote (*Champion*).

A Mexican specimen in the Berlin Museum is figured; Guatemalan examples have the pale colouring more ochraceous and the dark shadings more profound and black, the spots on the pronotum are also smaller.

5. **Resthenia luteigera.** (Tab. XXIV. fig. 19.)

Resthenia luteigera, Stål, Stett. ent. Zeit. xxiii. p. 317. 234 [1].

Hab. MEXICO [1].

The type in the collection of Dr. Signoret (not in "Mus. Holm." as stated [1]) is here figured.

6. **Resthenia melanochra.** Tab. XXII. fig. 4.)

Capsus menanochrus, H.-S. Wanz. Ins. viii. p. 17 [1].

Capsus melanochrus, H.-S. Wanz. Ins. viii. fig. 793.

Hab. MEXICO [1] (*Koppe, Mus. Berol.*).

B. *Lateral margins of the pronotum obtuse, not anteriorly subreflected. Rostrum about reaching or passing the intermediate coxæ.* Subg. RESTHENIA, Spin.

a. *Rostrum reaching the intermediate coxæ. Basal joint of the antennæ longer than the head.*

7. **Resthenia ornaticollis.** (Tab. XXII. fig. 5.)

Resthenia ornaticollis, Stål, Stett. ent. Zeit. xxiii. p. 317. 237 [1].

Hab. MEXICO [1].

The figure represents a typical specimen in the Stockholm Museum.

8. **Resthenia panamensis,** n. sp. (Tab. XXV. fig. 6.)

♀. Reddish ochraceous; head with the eyes, antennæ, apex, a circular fascia between the eyes, and a small spot at base, corium (excluding base), legs, and apex of rostrum black; coxæ reddish ochraceous; oviposital sheath ochraceous.

Antennæ thickly and finely pilose; tibiæ thickly and finely setose; lateral margins of the pronotum slightly sinuated.

Long. $7\frac{1}{2}$ millim.

Hab. PANAMA, Matachin (*Dr. Thieme, coll. Oberthür*).

9. **Resthenia univittata,** n. sp. (Tab. XXV. fig. 2.)

Ochraceous; eyes, a large triangular spot at base of pronotum, scutellum, corium, membrane, apices of femora, tibiæ, and tarsi dark fuscous or black; antennæ (third and fourth joints mutilated) black, the base of the first joint ochraceous; body beneath ochraceous, with the abdominal apex black.

Long. 7 millim.

Hab. GUATEMALA, San Isidro (*Champion*).

10. **Resthenia latipennis.** (Tab. XXII. fig. 6, and var. fig. 7.)

Resthenia latipennis, Stål, Stett. ent. Zeit. xxiii. p. 318. 240 [1].

Hab. MEXICO [1] (*Deppe, Mus. Berol.*); GUATEMALA, San Gerónimo (*Champion*).

Two Mexican specimens are here figured, the first being a typical and the second a varietal form of the species. A single Guatemalan specimen obtained by Mr. Champion agrees with the last, with the exception of the pale coloration being more ochraceous than red.

11. **Resthenia chiriquina,** n. sp. (Tab. XXV. fig. 3.)

Bright ochraceous; head, antennæ, two contiguous spots near anterior margin of pronotum, base of scutellum, corium, with a small spot at basal angles and the whole apical area from near apex of scutellum, membrane, legs (excluding coxæ), rostrum, disk of mesosternum, and abdomen black.

Second joint of the antennæ distinctly thickened and somewhat strongly pilose.

Long. 10 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

12. **Resthenia bracteata,** n. sp.

Black; lateral margin of head in front of eyes, base of first joint of antennæ, anterior area (concavely margined posteriorly) of pronotum, scutellum, head and body beneath, and coxæ bright ochraceous.

Long. 9–10 millim.

Hab. PANAMA, Bugaba (*Champion*).

13. **Resthenia obscurans,** n. sp. (Tab. XXV. fig. 4.)

Body above reddish ochraceous; head with a large central spot on vertex, and a smaller linear spot at apex, eyes, an irregularly arcuated fascia to pronotum, inner and outer claval margins, lateral margin (excluding base) of corium, cuneus, and membrane dark fuscous; antennæ dark fuscous, the base of the first joint reddish ochraceous. Legs reddish; tibiæ, tarsi, and the extreme apices of femora very dark fuscous or black. Body beneath reddish ochraceous; rostrum (excluding base) dark fuscous.

The body and antennæ are finely, and the tibiæ strongly pilose. The body is somewhat elongate and robust compared with the allied species.

Long. 9 millim.

Hab. PANAMA, Bugaba (*Champion*).

14. **Resthenia erubescens,** n. sp.

Dark sanguineous; head, antennæ, corium, membrane, and legs black; corium with a small sanguineous streak at basal angles; coxæ sanguineous; rostrum sanguineous, its apex and an annulated suffusion near centre dark fuscous.

The body is broad and subdepressed, the antennæ and tibiæ finely but thickly pilose.

Var. Head red, with the eyes black.

Long. $7\frac{1}{2}$–8 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

One specimen only was sent home from the Volcan de Chiriqui, and this represents the variety described above, a small series of specimens from Bugaba being perfectly constant.

15. **Resthenia högbergi.** (Tab. XXIV. fig. 20.)

Resthenia Högbergi, Stål, Stett. ent. Zeit. xxiii. p. 317. 238[1].

Hab. MEXICO[1].

The type is contained in the collection of Dr. Signoret, and is here figured.

16. **Resthenia atrata,** n. sp.

Body above, antennæ, and legs black; body beneath sanguineous, with the rostrum and disks of head, sternum, and abdomen black; basal half of posterior femora pale fuscous. Body broad and subdepressed, the cuneus and membrane rather paler in hue than the corium.

The body is broad, subdepressed, and obsoletely and finely pilose; the corium has the costal margin distinctly carinate and also possesses a distinct subcostal, curved, linear carination near base; the antennæ and tibiæ thickly pilose.

Long. 8 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

This species is apparently allied to *R. zetterstedti*, Stål, a species described from Rio Janeiro.

aa. *Basal joint of the antennæ about equal in length to that of the head, or very little longer or shorter.*

17. **Resthenia mimica,** n. sp.

Black; anterior half of pronotum, which is also centrally and posteriorly continued in a wedge-shaped streak into the black basal area, scutellum, base of corium to about middle of scutellum, and sternum bright yellow.

The second joint of the antennæ is somewhat distinctly incrassated in its apical half, and is distinctly pilose; tibiæ thickly and rather longly pilose.

Long. 11 millim.

Hab. PANAMA, Bugaba (*Champion*).

A single example of this interesting species was obtained by Mr. Champion. It closely resembles in colour and markings a species belonging to another section of the genus (*R. ornaticollis*, Tab. XXII. fig. 5), from which it differs by the shorter basal joint of the antennæ. *R. mimica* is also a larger insect than *R. ornaticollis*, and the markings of the pronotum are also different.

18. **Resthenia guatemalana,** n. sp. (Tab. XXV. fig. 5.)

Head brownish ochraceous, with a central linear spot at apex, the eyes and antennæ dark fuscous; pronotum, scutellum, and base of corium to about centre of scutellum pale stramineous; pronotum with two contiguous transversely elongate dark fuscous spots near anterior margin; corium (excluding base), membrane, and legs fuscous. Body beneath, with the head, sternum, and coxæ stramineous; the abdomen fuscous, with the margins of the segmental incisures stramineous.

Long. 8½ millim.

Hab. GUATEMALA, Aceituno (*Champion*).

This, like the last species, is represented (at present) by a single example, and closely resembles in general pattern above a species in another division of the genus (*R. chiriquina*, Tab. XXV. fig. 3), from which it structurally differs in the length of the basal joint of the antennæ. *R. guatemalana* is also a paler-coloured insect than *R. chiriquina* and the scutellal and sternal markings are different in the two species.

This superficial resemblance of two species belonging to different sections of the same genus, and thus structurally differentiated in what is best but inadequately described as in a subgeneric manner, is not uncommon in other families of insects and notably in the Rhopalocera. In some cases this has caused the erection of a number of unnecessary and perplexing subdivisions styled genera, and has elsewhere been somewhat grandiloquently described as affording the material for a new "philosophical extension of the theory of mimicry." The facts seem to show a biological law of which we are at present in ignorance.

19. **Resthenia plena,** n. sp.

Dull sanguineous; antennæ, eyes, scutellum, corium, membrane, a large oblong spot at apex of abdomen, apices of femora, and the tibiæ and tarsi black. Rostrum reaching the intermediate coxæ, its apex pitchy.

Body somewhat ovate, and finely and obscurely pilose.

Long. 8 millim.

Hab. MEXICO (*coll. Signoret*).

20. **Resthenia montivaga,** n. sp.

Body above, legs, antennæ, and rostrum black, the basal half of the posterior femora dull ochraceous, and the third and fourth joints of the antennæ pale fuscous; bases of the first joint ochraceous. Sternum and abdomen beneath reddish ochraceous; disk of sternum and lateral margins of prosternum blackish; coxæ reddish ochraceous, but more or less suffused with blackish.

Long. 7 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This species is allied to *R. atrata* (previously described at page 254) in superficial coloration; but differs in having a much more elongate and narrow body, the basal joint of the antennæ shorter, &c.

21. **Resthenia sudatus,** n. sp. (Tab. XXII. fig. 17.)

♀. Body above red; apex of head, antennæ, clavus (excluding basal third), apical margins of corium, cuneus, legs, central disk of mesonotum, and oviposital sheath to abdomen dark fuscous or black; basal vertex of head, a sinuated discal line near anterior margin of pronotum, margins of lateral pronotal angles, a subclaval linear streak to corium, membrane and rostrum fuscous, the last with the apical margins paler; coxæ red, more or less suffused with fuscous.

The body is broad and subdepressed, the tibiæ somewhat sparingly setose, the antennæ obscurely pilose.

Long. 8 milllim.

Hab. MEXICO (*Koppe, Mus. Berol.*).

b. *Rostrum reaching or passing the posterior coxæ.*

c. *Basal joint of the antennæ appreciably longer than the head.*

22. **Resthenia bicolor,** n. sp.

Reddish ochraceous; eyes, basal half of pronotum (excluding lateral margins), scutellum, corium, membrane, apex of head, a spot at abdominal apex, tibiæ and tarsi fuscous or black; antennæ fuscous, the first joint luteous, with its base and apex infuscated; head with a central longitudinal fuscous line on vertex; rostrum obscure reddish or pale fuscous, the basal joint reddish ochraceous and the apex pitchy.

Antennæ somewhat thickly and strongly pilose; tibiæ strongly and thickly setose.

Long. $8\frac{1}{2}$ to 9 millim.

Hab. GUATEMALA, Zapote (*Champion*).

cc. *Basal joint of the antennæ about equal in length to that of the head, or very little longer or shorter.*

23. **Resthenia bivittis.** (Tab. XXIV. fig. 21.)

Resthenia bivittis, Stål, Stett. ent. Zeit. xxiii. p. 318. 239[1].

Hab. MEXICO[1].

The type in the collection of Dr. Signoret is here figured.

24. **Resthenia vitticeps.** (Tab. XXIV. fig. 22.)

Resthenia vitticeps, Stål, Stett. ent. Zeit. xxiii. p. 318. 242[1].

Hab. MEXICO[1].

I am again indebted to Dr. Signoret for the loan of the type, which is here figured.

25. **Resthenia vittifrons.** (Tab. XXIV. fig. 23.)

Resthenia vittifrons, Stål, Stett. ent. Zeit. xxiii. p. 318. 241 [1].

Hab. Mexico [1].

The type in the collection of Dr. Signoret is here figured.

26. **Resthenia persignanda.** (Tab. XXII. fig. 21.)

Body above black and somewhat opaque; a small basal spot to head, anterior margin of pronotum, lateral margins of pronotum (obscurely and narrowly), and scutellum red; membrane fuscous; head beneath, sternum, rostrum, and legs black, lateral margins of prosternum broadly red; abdomen red, apical half of discal area black.

Antennæ (third and fourth joints mutilated) obscurely pilose; tibiæ moderately setose.

Long. 6 millim.

Hab. Mexico (*Mus. Holm.*).

27. **Resthenia exornata,** n. sp. (Tab. XXII. fig. 20.)

Sanguineous; head, antennæ, two large basal subtriangular spots to pronotum, lateral angles of scutellum, corium, membrane, rostrum, disk of sternum, coxæ, legs, and a large apical pyramidal spot to abdomen black or fuscous.

The tibiæ are thickly but moderately setose, the antennæ obscurely pilose, and the lateral margins of the pronotum are slightly concavely sinuate.

Long. 6 millim.

Hab. Mexico (*Deppe, Mus. Berol.*).

28. **Resthenia thoracica.** (Tab. XXII. fig. 14.)

♀. Sanguineous; head, eyes, antennæ, a small spot on anterior margin of pronotum, scutellum (excluding lateral angles*), corium, rostrum, legs, and ovipositral sheath to abdomen fuscous or black; coxæ sanguineous, membrane pale fuscous.

Antennæ thickly pilose; tibiæ thickly and finely setose; lateral margins of pronotum very slightly sinuate.

Long. 8 millim.

Hab. Mexico (*Koppe, Mus. Berol.*).

29. **Resthenia interpuncta,** n. sp. (Tab. XXII. fig. 15.)

♀. Sanguineous; head infuscated; central lobe of head, two spots near anterior margin of pronotum, basal angles of scutellum, cuneus (excluding base), disk of mesosternum, and ovipositral sheath to abdomen black; rostrum reddish brown; coxæ sanguineous, more or less suffused with fuscous; membrane fuscous. Antennæ mutilated.

Lateral margins of the pronotum distinctly sinuated.

Long. 8 millim.

Hab. Mexico (*Koppe, Mus. Berol.*).

This description is taken from a mutilated specimen; but the characters are sufficiently distinct to render its specific diagnosis unmistakable.

* These sanguineous basal angles to the scutellum have been overlooked by the artist, and do not appear, as they should do, in the figure.

30. **Resthenia marginanda.** (Tab. XXII. fig. 16.)

♀. Miniatous; anterior and posterior margins of pronotum and lateral margins of corium narrowly luteous. Antennæ black; head either dull ochraceous, with the apex and base black, or blackish, with a luteous spot at inner margin of eyes; pronotum with a transverse fuscous fascia a little before anterior margin; cuneus with its apex more or less broadly luteous; membrane pale fuscous. Body beneath dull ochraceous; lateral margins of prosternum, lateral margins of abdomen, ovipositral sheath, and lateral margins and apex of anal appendage more or less miniatous; coxæ and femora ochraceous, apices of posterior femora, tibiæ, tarsi, and rostrum fuscous.

The tibiæ are strongly but sparingly setose, the anterior margin of the pronotum is distinctly sinuated, and the basal portion of the lateral margins of the pronotum distinctly reflexed.

Long. 8 millim.

Hab. MEXICO, Oaxaca (*Deppe, Mus. Berol.*).

31. **Resthenia parva,** n. sp. (Tab. XXII. fig. 18.)

Miniatous; antennæ, apex, a circular fascia on vertex and basal margin of head more or less dark fuscous; membrane pale fuscous; acetabula, coxæ, and legs brownish ochraceous; tibiæ, tarsi, and rostrum fuscous.

Anterior margin of pronotum not sinuate; eyes somewhat large and prominent, and slightly directed backward; tibiæ finely setose.

Long. $5\frac{1}{3}$ millim.

Hab. MEXICO (*Deppe, Mus. Berol.*).

---

32. **Resthenia divisa.**

Capsus tetrastigma, H.-S. Wanz. Ins. ix. p. 166.

Capsus divisus, H.-S. Wanz. Ins. ix. fig. 960.

Resthenia divisa, Stål, Stett. ent. Zeit. xxiii. p. 317. 236 [1].

Hab. MEXICO [1] (*coll. Sign.*).

A specimen in Dr. Signoret's collection, which constitutes my only knowledge of this species, having both the rostrum and antennæ mutilated, I am unable to sectionize its systematic position. The lateral margins of the pronotum are obtuse and not anteriorly reflexed.

LOPIDEA.

Lopidea, Uhler, Hayden's Surv. Mont. p. 411 (1872).

The shape of the pronotum—which is "trapezoidal, about one half wider than long; the lateral edges carinately elevated; the middle of the posterior margin sinuately deflexed"—will alone separate this genus from *Resthenia*, to which it is closely allied.

According to our present knowledge, the geographical range of *Lopidea* appears to be restricted to the southern portion of the Nearctic Region and the northern portion of the Neotropical.

1. **Lopidea scitula.** (Tab. XXIII. fig. 23.)

Capsus scitulus, Walk. Cat. Het. vi. p. 99. 183 [1].

Hab. Mexico (*Deppe, Mus. Berol.*), Oaxaca [1], Presidio (*Forrer*); Guatemala, San Gerónimo (*Champion*).

A Mexican specimen is figrued.

Found by sweeping the paths in the fields of sugar-cane (*Champion*).

2. **Lopidea bellula,** n. sp.

Ochraceous; central fascia to head, eyes, antennæ, an indistinct suffusion at base of pronotum, scutellum, apical portion of clavus, apical margin of corium, cuneus, membrane, legs, rostrum, and apex of abdomen more or less dark fuscous.

Long. 6 millim.

Hab. Guatemala, San Isidro (*Champion*).

HADRONEMA.

Hadronema, Uhler, Hayden's Surv. Mont. p. 412 (1872).

This genus is allied to the preceding; but the body is less elongate, the antennæ have the third and fourth joints subequal in length and of nearly equal thickness.

The genus at present is only represented by a single species.

1. **Hadronema militaris.** (Tab. XXII. fig. 23.)

Hadronema militaris, Uhler, Hayden's Surv. Mont. p. 412 [1]; Bull. U.S. Geol. & Geog. Surv. ii. p. 317 [2], iii. p. 415 [3]; Wheeler's Rep. Geog. Expl. v. Zool. chap. xii. p. 838, t. 42. f. 12 * (1875).

Hab. North America, Colorado [1 2 3], Utah [1], California [1].—Mexico (*Mus. Holm.*).

A Mexican specimen agreeing perfectly with Mr. Uhler's description, and which is contained in the Stockholm Museum, is here figured.

Mr. Uhler further describes the species as variable "in the width of the pale margin of the hemelytra and in the extent of black on the pronotum" [1], and also in the base of the corium being "sometimes entirely whitish" [1]. It was collected on the hills of Colorado from July to September [2], and "seems to be a mountain-loving species, and did not occur to me on any of the lower levels on which I used the net" [3].

Division **PHYTOCARIA.**

Phytocaria, Reuter, Bih. Vet.-Ak. Handl. iii: 1, p. 6 (1875).

In this and the following divisions the antennæ are inserted on the inner side of the eyes; and the characters which appear principally to divide the *Phytocaria* from the next division are, to quote Dr. Reuter, "Hemelytra vena brachiali distincta, cuneo elongato-triangulari."

As I understand and use this division, the cuneus is elongate and subtriangular and always as long and generally longer than broad.

* These figures are too rough for any practical purpose.

COMPSOCEROCORIS.

Compsocerocoris, Reuter, Öfv. Vet.-Ak. Förh. 1875, no. 9, p. 70.

The principal characteristics of this genus appear to be the central basal sulcation to the head, the length of the antennæ (as long as the body), with the basal joint slightly incrassated and about equalling in length that of the pronotum and half of the head together, and the lateral angles of the pronotum obtusely acute. This genus was founded by Dr. Reuter for the reception of a Texan species.

Of similar habits to the European genus *Phytocoris* and obtained by beating (*Champion*).

1. **Compsocerocoris exustus**, n. sp.

Ochraceous, mottled with pale brownish; pronotum with four black spots on basal margin; scutellum with two similar spots near apex, and three or four small brownish spots arranged on inner margin of cuneus, and one very small and obscure on each inner margin of corium near apex. Antennæ ochraceous, with the basal joint strongly setose and obscurely annulated with brownish at middle and apex; second joint with the apex fuscous, middle of the second joint and base of the third greyish. Cuneus somewhat paler than the corium. Membrane mottled with brownish. Femora ochraceous, annulated with brownish; fore and intermediate tibiæ with three distinct dark fuscous annulations; posterior tibiæ with similar but very obscure annulations and longly and palely setose. Body beneath (carded specimen) ochraceous and more or less mottled as above. Two elongate fuscous spots near lateral margins of prosternum, and one at lateral margins of mesosternum.

Long. 7½ millim.

Hab. GUATEMALA, Quezaltenango (*Champion*).

2. **Compsocerocoris dubitatus**, n. sp. (Tab. XXV. fig. 12.)

Allied to the preceding species, but differing in the following particulars:—The pronotum is marked with a broad, central, longitudinal pale fascia, the eyes are dark fuscous, the second and third joints of the antennæ are concolorous and without the pale and dark markings; cuneus much paler, and membrane much darker.

Long. 7 millim.

Hab. GUATEMALA, Quiche Mountains (*Champion*).

It is with some doubt that I have described this form as a distinct species, though the markings are very divergent. Dr. Reuter has not stated that sexual differences of this nature are found in the genus, and we have received but a single specimen from Mr. Champion, and therefore cannot decide as to the sexual problem.

3. **Compsocerocoris vilis**, n. sp. (Tab. XXV. fig. 13.)

Ochraceous; basal joint of antennæ much mottled and annulated with brown, the apex somewhat reddish; some spots within the anterior and posterior margins of eyes, four longitudinal fasciæ to pronotum, which become somewhat macular at anterior and posterior margins, two spots to scutellum, a series of inner and outer claval spots, and three spots to cuneus, situate at basal angles and apex, reddish ochraceous. Femora ochraceous, mottled with brownish; the posterior femora with some obscure reddish annulations; tibiæ ochraceous, somewhat darker at bases and apices. Body beneath ochraceous, with reddish linear markings.

Long. 5½ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*); PANAMA, Bugaba (*Champion*).

4. **Compsocerocoris elegans,** n. sp. (Tab. XXV. fig. 14.)

Ochraceous; basal joint of antennæ annulated and mottled with brown; eyes fuscous; pronotum with the basal area broadly greenish, and behind the anterior collar somewhat greyish; clavus and the corium at claval area somewhat infuscated, the outer claval margin (excluding base) very bright castaneous; disk of corium greenish; cuneus with the apex bright castaneous, and with a small darker spot near inner basal angle. Membrane dull obscure ochraceous, shaded with pale fuscous, especially at base. Legs ochraceous; tibiæ outwardly and lineately fuscous; apices of the tarsi fuscous. Body beneath ochraceous, more or less mottled with brownish.

Long. $5\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

5. **Compsocerocoris annulicornis.**

Compsocerocoris annulicornis, Reuter, Öfv. Vet.-Ak. Förh. 1875, no. 9, p. 70[1].

Ferruginous of more or less intense hue in different specimens; antennæ with the basal joint thickly irrorated with pale ochraceous, second and third joints with their bases pale ochraceous; eyes fuscous; pronotum with the basal margin narrowly obscure ochraceous, and inwardly bordered by a transverse series of small fuscous spots; scutellum with the apex obscure ochraceous; corium with the costal margin more or less spotted with ochraceous; cuneus variable in hue, sometimes obscure ochraceous with the apex ferruginous, its inner or apical margin always spotted with ferruginous; legs ochraceous, femora (excluding bases) annulated and mottled with ferruginous.

This appears to be a most protean and variable species, and the following notes refer to what I consider to be but different forms of the same. In all the specimens, however, the pronotum has the basal margin narrowly obscure ochraceous, inwardly bordered by a transverse series of small fuscous spots.

Var. *a.* Eyes fuscous; second and third joints of the antennæ with their bases and an annulation a little beyond middle pale ochraceous. Tibiæ distinctly annulated.

Var. *b.* Second and third joints of the antennæ with their bases alone pale ochraceous.

Var. *c.* Resembling var. *b*, but with the eyes greyish.

Var. *d.* Eyes greyish or fuscous; antennæ as in preceding variety, colour pale and bright ferruginous; pronotum sometimes with two small discal dark spots; the tibiæ either very indistinctly or non-annulated.

Var. *e.* Resembling var. *d*, but with the corium, membrane, and cuneus largely irrorated with greyish.

Var. *f.* Third joint of the antennæ distinctly and broadly black at apex; legs as in vars. *d* and *e*.

Var. *g.* Antennæ unicolorous, the second and third joints not pale ochraceous at base; tibiæ as in the three preceding varieties.

Long. 6 to $6\frac{1}{2}$ millim.

Hab. NORTH AMERICA Texas[1]; GUATEMALA, San Gerónimo, Zapote, Cerro Zunil, Quezaltenango, Pantaleon, Las Mercedes, Totonicapam, El Tumbador (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

After a prolonged examination I can, at present, find no real specific differences among the above divergent forms, whose variation *inter se* is so great, that I feel little hesitation in placing them all under the cognomen of Reuter's species; and although but one specimen really appertains fully to the description of that species, yet that seems so inseparably linked with the most extreme forms of the series, that their specific unity appears to be reasonably demonstrated, and I have treated them accordingly. Even the varietal characters given above do not at all adequately express the extremely protean

phases, both in colour and markings, that can be observed in the series of specimens now before me, and this irrespective of local habitats to which they do not appear to be confined, save and except that var. *e* is represented alone by three specimens from Panama.

6. **Compsocerocoris mistus,** n. sp. (Tab. XXV. fig. 15.)

Allied to typical forms of the last species, but larger, and also differing in having the antennæ (excluding the basal joint) black, the bases of the second and third joints being narrowly pale ochraceous, the basal joint ochraceous, spotted and annulated with blackish, the lateral margins of the pronotum broadly blackish, &c.
Long. 7 millim.

Hab. GUATEMALA, San Gerónimo, Totonicapam (*Champion*).

TÆDIA, gen. nov.

Allied to *Compsocerocoris*, but more robust, the posterior femora shorter and much more incrassated, the posterior tibiæ distinctly curved. Antennæ with the basal joint about equal to the length of the pronotum and half the length of the head together, incrassated, pilose, and faintly but distinctly nodulated at the extreme apex; second joint not quite twice the length of the first, its apical half incrassated; third and fourth extremely slender. Rostrum reaching the intermediate coxæ. Pronotum long, anteriorly depressed, about twice as broad at lateral angles as at anterior margin. Scutellum large, about subequal in length to pronotum, the lateral angles slightly convex, the disk distinctly and longitudinally depressed and foveate, thus rendering the lateral margins broadly and roundly subgibbous. Body pilose.

1. **Tædia bimaculata,** n. sp. (Tab. XXV. fig. 16.)

Head ochraceous, eyes black; antennæ with the first joint ochraceous, the second fuscous, with the base ochraceous, third pale fuscous, with the base greyish white; pronotum pale brownish, speckled with ochraceous, with a central and two lateral ochraceous fasciæ and with two transverse black spots on disk; scutellum and corium pale brownish speckled with ochraceous, the first with a central longitudinal narrow ochraceous fascia; cuneus paler than the corium, with its apex black; membrane pale smoky hyaline. Body beneath and legs ochraceous; sternum and abdomen with a lateral series of blackish spots (three on sternum), and those on abdomen gradually decreasing in size towards apex; apices of tarsi fuscous.
Long. $7\frac{1}{2}$–8 millim.

Hab. PANAMA, Bugaba (*Champion*).

NEUROCOLPUS.

Neurocolpus, Reuter, Öfv. Vet.-Ak. Förh. 1875, no. 9, p. 69.

The antennæ are the most striking features in this genus; the basal joint is distinctly shorter than the pronotum, but very strongly incrassated, and, in the species here referred to, subnodulose at apex; it is also densely setose, the apices of the setæ being dilated; the second joint is twice as long as the first, with its apex strongly incrassated; and the third and fourth joints together are shorter than the second.

1. **Neurocolpus mexicanus,** n. sp. (Tab. XXIII. fig. 5.)

Ochraceous, thickly pilose; antennæ with the apex of the second joint broadly fuscous, the third fuscous with the base ochraceous; margins of the lateral angles of pronotum slightly fuscous; scutellum more or less infuscated; inner claval margin and two discal but broken transverse fasciæ to corium (one near base and

the other about centre) fuscous; membrane pale fuscous, with a greyish spot on each lateral margin. Body beneath ochraceous; coxæ and basal halves of femora luteous; apical portion of femora, tibiæ, and tarsi ochraceous (posterior legs mutilated); rostrum luteous, its apex infuscated.

Long. 7 millim.

Hab. Mexico (*Sallé, Mus. Holm.*).

2. **Neurocolpus affinis,** n. sp. or var.?

Neurocolpus mexicanus, Dist. var.?

Head, pronotum, and scutellum pale ochraceous, corium fuscous or brownish testaceous, cuneus reddish; antennæ with the basal joint somewhat castaneous, the second joint ochraceous with the apex fuscous, third fuscous with the base ochraceous, fourth fuscous; eyes fuscous; corium with obsolete transverse darker fasciæ as in preceding species; membrane pale fuscous, with a greyish spot on each lateral margin. Body beneath pale ochraceous, lateral margins of sternum and abdomen darker; coxæ pale ochraceous; anterior and intermediate femora ochraceous, thickly speckled with fuscous; posterior femora fuscous, their base, a subcentral (sometimes obsolete) and apical annulation pale ochraceous; tibiæ and tarsi ochraceous, apices of tarsi and base of posterior tibiæ fuscous.

Var. *a*. Posterior area of pronotum and scutellum thickly speckled with fuscous.

Var. *b*. Corium ochraceous, the dark transverse fasciæ distinct, and the inner margin of clavus fuscous.

Long. $5\frac{1}{2}$–6 millim.

Hab. Guatemala, San Gerónimo (*Champion*); Panama, Volcan de Chiriqui 2000 to 3000 feet, Bugaba (*Champion*).

I have considerable doubt as to this being a distinct species from the preceding, and think it possible that it may be included in some varietal forms of the same. However, it is smaller in size, and the colour-differences are considerable. The difficulty in the way of a decision arises from the fact of the type and sole representative of *N. mexicanus* being somewhat mutilated, and thus a series of Mexican specimens may probably prove the two forms here described as distinct species to be but varietal forms of only one.

PARACALOCORIS, gen. nov.

Body above distinctly pilose. Antennæ with the basal joint incrassated, shorter than the pronotum, thickly clothed with fine long hairs; second joint about twice as long as first, its apex distinctly incrassated; third and fourth slender, and together subequal to or longer than the second; fourth a little longer than the third. Pronotum distinctly subgibbous and convex at base, the width at posterior angles being about three times that of anterior margin. Rostrum reaching the intermediate coxæ. Other characters as in *Calocoris*.

Pronotum generally with two discal subexcavated spots.

A. *Pronotum with two prominent and subexcavated black discal spots.*

1. **Paracalocoris jurgiosus.** (Tab. XXV. fig. 17.)

Calocoris jurgiosus, Stål, Stett. ent. Zeit. xxiii. p. 320. 246[1].

Hab. Mexico (*coll. Sign.*); Guatemala, Cerro Zunil (*Champion*).

A Guatemalan specimen is here figured, which exactly agrees with the Mexican type in the collection of Dr. Signoret. In the original description of this species the two prominent, though small, discal black spots to the pronotum apparently escaped notice.

2. **Paracalocoris attenuatus**, n. sp.

Fuscous or brownish testaceous, irrorated or marked with luteous. Antennæ with the first joint brownish testaceous, speckled with luteous; second joint fuscous, annulated with luteous near base; third and fourth pale fuscous, luteous at base; head brownish testaceous irrorated with luteous, especially at inner margins of eyes; pronotum brownish testaceous, with the anterior area, anterior and posterior margins, a central discal longitudinal line, and a few scattered spots luteous, posterior margin of anterior collar and two discal spots blackish; scutellum with the apex, a central longitudinal line, on each side of which is a basal sublunulate line (sometimes obsolete) luteous; clavus and corium with a number of linear and small rounded luteous spots; cuneus reddish, irrorated with luteous and with a black spot at apex and inner basal angle; membrane fuscous with greyish spots, and the discal cellular margin ochraceous. Body beneath brownish ochraceous, irrorated with luteous; legs brownish ochraceous; tibiæ annulated with luteous at middle and apex, the last annulation sometimes pale castaneous; tarsi annulated with luteous, bases of posterior femora more or less luteous.

Long. 4–5 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*); PANAMA, Bugaba (*Champion*).

Some varieties of this species have the basal annulation to the second joint of the antennæ quite obsolete. Mr. Champion informs us that this is one of the commonest species of the genus, and was obtained by sweeping low-growing plants.

3. **Paracalocoris fistulosus** *, n. sp. (Tab. XXII. fig. 11.)

Head brownish testaceous, thickly covered with oblique ochraceous striæ; eyes fuscous; antennæ mutilated; pronotum brownish testaceous, the margins narrowly ochraceous, with two large discal subexcavated black spots margined with ochraceous; scutellum brownish testaceous, with two basal ochraceous streaks, and the apex of the same colour; corium brownish ochraceous, the costal and inner margins much paler; base of clavus brownish testaceous; cuneus reddish; membrane pale fuscous, the cellular margins ochraceous. Body beneath ochraceous; legs brownish testaceous, femora thickly spotted with luteous, the tibiæ annulated with the same colour; rostrum fuscous, with the base ochraceous.

Long. $7\frac{1}{2}$ millim.

Hab. MEXICO (*Sallé, Mus. Holm.*).

4. **Paracalocoris annulatus**, n. sp.

Head, pronotum, and scutellum ochraceous, the pronotum with two discal excavated black spots a little before centre; eyes fuscous; antennæ with the basal joint pale castaneous, second ochraceous with its base narrowly and its apex broadly fuscous or black, third ochraceous, its apex fuscous, fourth brownish ochraceous; corium brownish ochraceous, the lateral margin, a spot on apical margin, and the claval apex more or less ochraceous; cuneus reddish; membrane fuscous. Body beneath and legs brownish ochraceous; anterior and intermediate tibiæ with a central pale ochraceous annulation; posterior tibiæ with two similarly coloured annulations, one before centre and one at apex; tarsi ochraceous, their apices fuscous.

Var. Second joint of the antennæ with two pale annulations, one near base and one preceding the black apical portion.

Long. 5–$5\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet, Bugaba (*Champion*).

* Owing to the absence of the antennæ in the typical specimen, the generic position of this species is rendered, for the present, somewhat uncertain. Judging, however, from the pilose body and the subexcavated black discal spots to the pronotum, there seems little doubt that it belongs to the new genus I have here proposed. As the first aim of this work is of a faunistic character, I have figured many unique though mutilated species, in order to make our enumeration as complete as possible.

5. **Paracalocoris molliculus,** n. sp. (Tab. XXV. fig. 18.)

Brownish ochraceous and finely pilose; eyes and apical third of the second joint of antennæ dark fuscous; two black central, discal subexcavated spots to pronotum. The head has a central longitudinal line, and the margins from base to apex passing inner margin of eyes luteous; third and fourth joints of antennæ luteous, the fourth very pilose and fuscous near base and apex; the discal black spots to pronotum are slightly surrounded with luteous; the scutellum is very finely transversely wrinkled, with a central pale levigate line; membrane dark shining ochraceous, the cellular margins darker; body beneath much paler, *some specimens* having a submarginal segmental series of small fuscous spots to the abdomen; legs brownish ochraceous, bases of the femora paler.

Long. $6\frac{1}{2}$ to $7\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

B. *Pronotum without the prominent subexcavated black discal spots.*

6. **Paracalocoris balteatus,** n. sp. (Tab. XXV. fig. 19.)

Brownish ochraceous, finely pilose; antennæ with the first and second joints pale castaneous, the apex of the second infuscated; third joint pale luteous and fourth black; head with the disk obliquely striated on each side, the eyes dark castaneous; pronotum olivaceous, the lateral angles somewhat darker, the anterior collar, some spots or suffusions before anterior margin, and the posterior margin from behind lateral angles luteous, the last containing a central basal brownish fascia; scutellum distinctly gibbous on disk, the apex luteous; apical angle of corium and apex of cuneus luteous; membrane ochraceous, with a pale luteous spot near apex of cuneus, and some darker spots at base and on lateral margins; body beneath paler, a fuscous spot on lateral portions of meso- and metasternums, and a submarginal series of blackish spots to abdomen; legs ochraceous, apices of femora with darker annulations, those of the posterior femora fuscous.

Long. $9\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

7. **Paracalocoris lunatus,** n. sp. (Tab. XXV. fig. 20.)

Dark castaneous, finely pilose; pronotum, excluding a wide basal and anteriorly lunate fascia, luteous; cuneus reddish, its lateral margins paler, and its inner basal angle somewhat fuscous; antennæ dark castaneous, apical portion of the second joint infuscated, third joint ochraceous, its apex fuscous; head with the apex, lateral margins, and eyes pitchy; scutellum with a central pale levigate line; corium with the apical portion somewhat darker, its lateral margins narrowly paler; membrane pale fuscous, with a pitchy spot at base; body beneath with the head pitchy, the sternum luteous, and the abdomen brownish ochraceous, the last with an obscure submarginal series of small dark spots; coxæ very dark castaneous; legs dark castaneous, anterior and intermediate tibiæ annulated with luteous near apex; tarsi ochraceous, their apices infuscated.

Long. 7 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

8. **Paracalocoris mastrucatus,** n. sp. (Tab. XXV. fig. 21.)

Ochraceous, finely pilose; pronotum (excluding a basal and anteriorly somewhat lunate fascia) and cuneus luteous; antennæ ochraceous, apical half of the second joint dark castaneous; eyes pale reddish; pronotum with two small brownish discal spots a little before middle, membrane pale fuscous; body beneath ochraceous (*carded specimen*); coxæ and femora castaneous, apices of the femora (those of the anterior very obscurely) ochraceous; tibiæ and tarsi ochraceous; tarsal apices fuscous.

Long. 7 millim.

Hab. PANAMA, Bugaba (*Champion*).

PAPPUS, gen. nov.

Allied to *Paracalocoris*, but shining and sparingly pilose; head longer, second joint of antennæ not suddenly thickened near apex, but gradually thickened from base; third and fourth joints not slender but incrassated, the third longer or subequal in length to the fourth; pronotum not subgibbous, the base slightly convex, but less oblique towards lateral angles than in *Paracalocoris*.

1. **Pappus sordidus**, n. sp. (Tab. XXV. fig. 22.)

Reddish ochraceous, eyes pale fuscous; apex of scutellum ochraceous; lateral margins of corium (gradually widening to apex) ochraceous; cuneus reddish, membrane pale fuscous, the cellular margins reddish; body beneath and legs reddish ochraceous. The antennæ are pilose, the second joint more than twice the length of the first; basal half of pronotum distinctly punctate; scutellum finely and transversely wrinkled; corium (excluding lateral margins) punctate.

Long. 6 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

GARGANUS.

Garganus, Stål, Stett. ent. Zeit. xxiii. p. 321 (1862).

In this genus the basal joint of the antennæ is longer than the pronotum and more than half the length of the second, which is thickened and gradually attenuated at the base and apex; the head is vertically deflexed in front of the eyes.

These characters will alone separate *Garganus* from the two preceding genera, to which it is clearly allied.

1. **Garganus albidivittis.** (Tab. XXV. fig. 23.)

Garganus albidivittis, Stål, Stett. ent. Zeit. xxiii. pp. 322, 252[1].

Hab. MEXICO[1] (*coll. Sign.*); GUATEMALA, San Gerónimo (*Champion*).

A Guatemalan variety of this species is here figured, which differs from typical Mexican specimens by the very broad pale vitta to the scutellum.

Found by sweeping the margins of cane-fields (*Champion*).

CALOCORIS.

Caloçoris, Fieber, Crit. Gen. p. 24 (1858); Eur. Hem. pp. 65 & 251 (1861); Walk. Cat. Het. vi. p. 42 (1873); Reut. Bih. Vet.-Ak. Handl. iii: 1, p. 11 (1875); Saund. Trans. Ent. Soc. 1875, p. 255.

This somewhat extensive genus is common in the Palæarctic Region, and occurs in the Nearctic and Neotropical Regions, and will doubtless be found to be generally and widely distributed, when our knowledge of the exotic Capsidæ is extended.

The differential characters between this and *Paracalocoris* have already been given. In all the species here enumerated as belonging to the genus *Calocoris* the rostrum about reaches the posterior coxæ.

A. *Pronotum marked with two discal black spots.*

1. **Calocoris fasciativentris.** (Tab. XXV. fig. 24.)

Calocoris fasciativentris, Stål, Stett. ent. Zeit. xxiii. pp. 320, 247[1].

Hab. Mexico[1], San Luis Potosi (*Dr. Palmer*).

The type in the collection of Dr. Signoret is here figured.

2. **Calocoris tinctus,** n. sp. (Tab. XXII. fig. 8.)

Ochraceous or reddish ochraceous; head, antennæ (apical joints mutilated), two spots on disk of pronotum and a broad irregular transverse suffusion at base of same, scutellum, apical half of clavus, inner margin of corium and a narrow subcostal line at base of same, inner basal angle of cuneus, basal half of membrane, body beneath, rostrum, and legs black. Abdomen with narrow transverse ochraceous fasciæ. Anterior tibiæ with an obscure ochraceous central annulation (intermediate and posterior legs mutilated).

Long. $7\frac{1}{2}$ millim.

Hab. Mexico (*Sallé, Mus. Holm.*).

B. *Pronotum indistinctly marked with two discal spots.*

3. **Calocoris semiopacus,** n. sp. (Tab. XXII. fig. 9.)

Closely allied to the preceding species but smaller; the pronotum almost totally suffused with black, and the discal spots absent; corium more suffused with black; body beneath and legs brownish; abdomen with a lateral fascia and apical segment ochraceous; anal appendage, apices of the tibiæ, tarsi, and apex of rostrum black.

Long. 6 millim.

Hab. Mexico, Oaxaca (*Deppe, Mus. Berol.*).

C. *Pronotum without the discal spots.*

4. **Calocoris opacus.** (Tab. XXII. fig. 10.)

Capsus opacus, Walk. Cat. Het. vi. p. 100, 184[1].

Hab. Mexico[1] (*Mus. Holm.*).

A specimen belonging to the Stockholm Museum is here figured.

5. **Calocoris nigricans,** n. sp. (Tab. XXII. fig. 22.)

Black, shining, pilose, and punctate; abdomen beneath and legs (anterior and intermediate legs mutilated) paler or somewhat castaneous; membrane pale fuscous. The lateral margins of the pronotum and corium are very longly pilose.

Long. $6\frac{1}{2}$ millim.

Hab. Mexico (*Sallé, Mus. Holm.*).

---

6. **Calocoris? inustus,** n. sp. (Tab. XXIII. fig. 17.)

Greenish ochraceous; antennæ, eyes, apex and basal margin of the head, two large rounded discal spots to pronotum, a central basal spot to scutellum, and head and body beneath black; legs, rostrum, and extreme

base of antennæ pale greenish ochraceous. Membrane pale brownish ochraceous, the cellular margins ochraceous. Apex and inner basal angle of cuneus ochraceous.
Long. 5 millim.

Hab. MEXICO, Oaxaca (*Deppe, Mus. Holm.*).

Two specimens of this species have passed through my hands, both, however, more or less mutilated. I have therefore considered it best to place the species provisionally in the genus *Calocoris*, to which it certainly has the strongest affinities, if not really attributable to that genus.

CALONDAS, gen. nov.

Allied to *Calocoris*, but with the posterior margin of the pronotum convex; the posterior femora much incrassated. Antennæ with the basal joint slightly incrassated and about equal in length to that of the head; second about twice the length of the first, and with its apical half incrassated; third much thinner than second, but stouter and longer than fourth. Body shining. Rostrum reaching the intermediate coxæ.

Found on low-growing plants (*Champion*).

1. **Calondas superbus,** n. sp. (Tab. XXIII. fig. 22.)

Ochraceous or greenish ochraceous; head, eyes, first and second joints of the antennæ, a broad subbasal fascia to pronotum, clavus, and an obscure transverse fascia to corium near claval apex, black; antennæ with the third joint luteous, its apex narrowly fuscous, fourth joint fuscous, with its base luteous; costal margin of corium (obsolete at base) and apex of cuneus reddish; membrane pale fuscous, with an obscure greyish spot on each outer margin; body beneath pale ochraceous or greenish ochraceous, disk of mesosternum and apex of abdomen roseate; legs concolorous, posterior femora and base of posterior tibiæ pale reddish; tarsi more or less infuscated.
The body is shining but distinctly pilose above.
Long. $5\frac{1}{2}$–6 millim.

Hab. MEXICO (*Deppe, Mus. Berol.*); GUATEMALA, Cerro Zunil, El Zumbador (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet and 4000 to 6000 feet (*Champion*).

A Mexican specimen is here figured.

2. **Calondas fasciatus,** n. sp. (Tab. XXVI. fig. 1.)

Head luteous, with the apex and basal margin black; eyes pale brownish; antennæ with the first and second joints black, third and fourth joints creamy white, apex of the fourth fuscous. Pronotum black, with a central transverse fascia and the basal margin pale greenish. Scutellum black, with the lateral margins and apex pale greenish. Corium pale testaceous, with greenish suffusions on basal half; costal margin (obsolete at base and widening at apex) bright castaneous; claval margins blackish; cuneus greenish, the apex broadly castaneous; membrane pale fuscous, the cellular margins darker. Body beneath ochraceous; prosternum black, with a central transverse fascia and the basal margin (both continued from pronotum above) pale greenish; a lateral black spot to meso- and metasternums, and a black spot at base of posterior coxæ; femora and posterior tibiæ pale testaceous, anterior and intermediate tibiæ greenish, with their apices pale testaceous; anterior and intermediate tarsi infuscated, posterior tarsi pale luteous.
The body above is shining; pronotum distinctly and somewhat coarsely punctate; scutellum finely and transversely wrinkled, its margins levigate; corium distinctly and thickly pilose.
Long. 8 millim.

Hab. PANAMA, Bugaba (*Champion*).

In the specimen figured the clavus is castaneous, in all other specimens examined it is black.

3. **Calondas testaceus,** n. sp. (Tab. XXVI. fig. 2.)

Testaceous; basal margin of pronotum and the scutellum (excluding basal margin) pale greenish; eyes, subbasal margin of pronotum, claval margins, and apical margins of cuneus and corium blackish. Costal area of corium ochraceous, the costal margin of the corium (obsolete at base) and the cuneus pale testaceous or reddish. Membrane pale fuscous, the basal angle blackish. Body beneath, rostrum, and legs pale testaceous; head beneath luteous. Antennæ testaceous, apex of the second joint and the whole of the third joint ochraceous (fourth joint mutilated).

The body above is shining and distinctly pilose, especially on the corium and scutellum.

Long. 11 millim.

Hab. Costa Rica, Irazu (*Rogers*).

MEGACŒLUM.

Megacœlum, Fieber, Crit. Gen. p. 21 (1858); Eur. Hem. p. 64. 249 (1861); Walk. Cat. Het. vi. p. 42 (1873).

In this genus the extreme apex of the scutellum is deflexed and curved downwards, a character which with its subopaque coloration will sufficiently distinguish it from the preceding genus.

1. **Megacœlum? signatum,** n. sp. (Tab. XXIII. fig. 11.)

Pale ochraceous, head and pronotum somewhat darker; scutellum with two black spots near apex; membrane pale hyaline, cellular margins pale ochraceous; body beneath, rostrum, and legs concolorous; eyes fuscous.

Long. 8 millim.

Hab. Mexico (*Sallé, Mus. Holm.*).

PROBA, gen. nov.

Body elongate, ovate, shining; hemelytra semitransparent; margin of the corium somewhat convex. Head anteriorly deflexed in front of the insertion of the antennæ. Antennæ pilose; basal joint moderately incrassated, about as long as the head; second joint twice as long as the first, its apical half moderately incrassated, third and fourth slender, third about twice the length of fourth, and together shorter than second. Pronotum sparingly and faintly punctate, its posterior margin more than twice the breadth of anterior, and concavely sinuate before scutellum. Anterior and intermediate tibiæ finely, and posterior tibiæ strongly setiform. Rostrum reaching the intermediate coxæ.

1. **Proba gracilis,** n. sp. (Tab. XXVI. fig. 3; var. *b*, Tab. XXV. fig. 25.)

Pale luteous; second joint of the antennæ (excluding base), basal margin, and four irregular discal spots to head, two large spots near anterior margin of pronotum, scutellum (excluding lateral margins and apex), extreme lateral margins of corium, apical angle of cuneus, and basal angle of membrane black; third and fourth joints of antennæ fuscous; basal fascia to pronotum, clavus, a central fascia to membrane (widened at base and apex), and apices of posterior femora more or less fuscous.

Var. *a.* Darker, the eyes fuscous, corium (excluding costal areas) infuscated.

Var. *b.* Pronotum black, with a central ochraceous fascia, clavus more or less black; corium with two large blackish spots at inner angles.

Long. 5 millim.

Hab. Guatemala, Cerro Zunil, Quezaltenango, Totonicapam (*Champion*).

I am quite unable to separate specifically the forms described above as appertaining to this species, which is apparently of a most protean character.

PARAPROBA, gen. nov.

Allied to *Proba*, but differing by the more elongate body; the margin of the corium not convex, but straight or slightly concavely sinuate; tibiæ non-setose; third and fourth joints of antennæ together as long as second joint.

1. **Paraproba fasciata,** n. sp. (Tab. XXVI. fig. 4.)

Pale ochraceous; eyes, antennæ (excluding basal joint), a transverse fascia between the lateral angles of the pronotum, scutellum (excluding lateral margins and apex), and an inner claval fascia black; claval sutural margins terminating and fusing in a transverse fuscous fascia to corium. Membrane pale fuscous, with the base and apex more or less pale ochraceous. Body beneath (*carded specimen*) with the posterior margin of prosternum, oblique lateral fasciæ to meso- and metasternums, a marginal segmental row of spots to, and the apex of, the abdomen black.

Var. *a*. Pronotum with an anterior narrow black fascia, the transverse fascia between the lateral angles replaced by two large lateral spots; scutellum ochraceous, the margins narrowly black. Apices of posterior femora more or less fuscous.

Var. *b*. Head black, the lateral spots to pronotum (as in var. *a*) extending to near anterior margin.

Var. *c*. Differing from var. *b* by having the scutellum wholly black.

Long. $3\frac{1}{2}$–4 millim.

Hab. GUATEMALA, San Gerónimo, Cerro Zunil (*Champion*).

This appears to be a variable species, but the general characters, and the colour markings of the antennæ and membrane are always constant and distinctive.

2. **Paraproba pallescens,** n. sp. (Tab. XXVI. fig. 5.)

Pale ochraceous; apex of the second joint of antennæ and eyes black, two small discal spots to corium and cellular margins to membrane fuscous. Body beneath and legs pale ochraceous.

Long. 4 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

NEOPROBA, gen. nov.

Allied to *Paraproba*, but differing in having the pronotum distinctly transversely constricted a little before middle; antennæ more robust, the first joint shorter than the head, second joint shorter than the third and fourth together; tibiæ either obscurely or sometimes prominently setose.

a. *Tibiæ prominently setose.*

1. **Neoproba rubescens,** n. sp. (Tab. XXVI. fig. 6.)

Pale reddish ochraceous and finely pilose; head ochraceous, with the eyes black; antennæ with the basal joint black, its base and apex ochraceous, second joint ochraceous with its base black, third and fourth joints fuscous; pronotum with the basal portion behind constriction generally paler and less reddish in hue; scutellum with a pale lateral fascia on each side (not occupying basal angles nor reaching apex); membrane pale fuscous, the cellular margins reddish. Body beneath reddish ochraceous; legs ochraceous, bases of posterior tibiæ narrowly fuscous.

Long. 5 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

b. *Tibiæ obscurely setose.*

2. **Neoproba varians,** n. sp. (Tab. XXVI. fig. 7.)

Very pale ochraceous, the pronotum and scutellum more or less roseate in hue. Head pale greenish, the basal margin, apex, a central longitudinal fascia and eyes black; antennæ black, base and apex of the first joint and apex of the second joint pale greenish; pronotum with the anterior collar pale greenish; body beneath (*carded specimen*) with the sternum roseate and the abdomen greenish; legs pale greenish ochraceous with dark speckles, tibial bases narrowly fuscous.

Long. 4 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

This species is somewhat variable in markings, the second joint of the antennæ being sometimes broadly annulated with ochraceous.

PANDAMA, gen. nov.

Head moderately robust, not or very slightly anteriorly deflected. Antennæ with the first joint robust and about equal in length to, or very slightly longer than, the head; second joint slender and about twice the length of the first; third and fourth joints together longer than the second. Pronotum subtriangular, the posterior margin concave and twice the width of the anterior margin, which possesses a very distinct and well-developed collar. Tibiæ non-setose. Other characters as in the two preceding genera.

1. **Pandama præclara,** n. sp. (Tab. XXVI. fig. 8.)

Head, pronotum, and scutellum pale greenish; eyes and basal joint of antennæ black, remainder of antennæ pale ochraceous; corium very pale ochraceous and semihyaline, speckled with brownish, with the apex narrowly fuscous, and with a large fuscous spot near costal margin a little before apex; cuneus pale hyaline, its apex fuscous; membrane very pale brownish and subhyaline, the cellular margins fuscous; body beneath and coxæ greenish; legs ochraceous, with the tarsal apices fuscous (rostrum mutilated).

Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

I have not seen the species mentioned below, and am in doubt as to its affinities, but it would seem to be near *Neurocolpus*.

Capsus scrupeus, Say, Heterop. New Harm. 23. no. 13.

Phytocoris scrupeus, Uhler, Bull. U. S. Geol. & Geog. Surv. ii. p. 317[1].

Capsus tetrastigma, H.-S. Wanz. Ins. ix. fig. 959[2].

Capsus externus, H.-S. Wanz. Ins. viii. p. 16, fig. 791.

Hab. NORTH AMERICA, Southern States [1].—MEXICO [1 2].

Mr. Uhler remarks that this "is a very variable insect, both in colours and in the width and thickness of the body and members. Pigmy specimens often occur in Eastern Massachusetts. I have found it in July on the grape-vines north of Baltimore.

"The two figures of Herrich-Schäffer represent varieties which are occasionally found in Maryland. Neither of them represents accurately the shape of the joints of the antennæ, although figure 791 is more nearly correct than the other."

These two forms figured by Herrich-Schäffer are indeed very distinct; and though

Mr. Uhler states they are varieties of one species; I think a mistake may have been made in that respect, more particularly as he refers to the description as well as the figure of *C. tetrastigma*, the first of which really refers to another species *C.* (*Resthenia*) *divisa*, as pointed out by Stål and previously recorded here (*anteà* p. 258).

Division **CAPSARIA.**

Capsaria, Reuter, Bih. Vet.-Ak. Handl. iii: 1, p. 6 (1875).

The following characters used by Dr. Reuter in his diagnosis of this division—"cuneo breviusculo, fractura sæpe profunda"—appear most easy of recognition, and, as I understand the division and use it, the Capsaria have the cuneus shorter than in the preceding division, but principally broader at the base.

LYGUS.

Lygus, Hahn, Wanz. Ins. i. p. 147 (1831); Fieber, Crit. Gen. p. 42 (1858); Eur. Hem. p. 272 (1861); Reuter, Bih. Vet.-Ak. Handl. iii: 1, p. 15 (1875).

In *Lygus* the second joint of the antennæ is not, or very slightly, incrassated; the first joint of the posterior tarsi is very little longer than the second; the eyes are moderately exserted; the hemelytra are more or less pubescent; the cuneus moderately elongated.

This genus probably occurs wherever the Capsidæ are found.

1. **Lygus pratensis.** (Tab. XXIII. figs. 4, 6, 7, & 16, vars.)

Cimex pratensis, Linn. Syst. Nat. p. 728; Faun. Suec. p. 949; Scop. Ent. Carn. p. 133.

Lygæus pratensis, Fabr. Ent. Syst. iv. p. 171. n. 126; Syst. Rhynch. p. 234. n. 155; Fall. Mon. Cim. p. 83.

Phytocoris pratensis, Fall. Hem. Suec. i. p. 90; Kol. Mel. Ent. ii. p. 119. n. 99.

Capsus pratensis, Sahlb. Geoc. Fenn. p. 111; Kirschb. Caps. p. 64. n. 112; Flor, Rhyn. Liv. i. p. 517.

Lygus pratensis, Fieb. Eur. Hem. p. 273. n. 1; Dougl. & Scott, Hem. p. 464. n. 8; Reut. Hem. Gymn. Sc. et Fenn. i. p. 70; Öfv. Vet.-Ak. Förh. 1875, p. 72. n. 6.

Lygæus umbellatorum, Panz. Faun. Germ. p. 93. n. 19.

Phytocoris alpina, Kol. Mel. Ent. ii. p. 20. n. 100, t. 10. f. 24.

Capsus gemellatus, H.-S. Wanz. Ins. iii. p. 81, t. 99. f. 301; Kirschb. Caps. p. 64. n. 102.

Coreus? *lineolaris*, Pal. Beauv. Ins. p. 187, t. ii. f. 7.

Lygus lineolaris, Uhler, Hayden's Surv. Mont. p. 413. 1[1]; Bull. U.S. Geol. & Geogr. Surv. ii. p. 818. 1[2]; ib. iii. p. 415. 1[3].

Capsus oblineatus, Say, Het. New. Harm. p. 21. 7.

Lygus redimitus, Uhler*.

Lygus diffusus, Uhler*.

* Mr. Uhler (Hayd. Surv. Mont. p. 413. 1) gives these names as synonyms of *L. lineolaris*, Pal. Beauv., but does not give a reference to their publication, which, at the time of writing, I have not traced.

Hab. EUROPE; NORTHERN ASIA; NORTH AMERICA, Canada [1], United States generally [1], Colorado [1 3].—MEXICO (*Mus. Holm.*), Oaxaca (*Deppe, Mus. Berol.*), Ciudad in Durango (*Forrer*); GUATEMALA, Dueñas, Cerro Zunil, Quezaltenango, and near the city of Guatemala (*Champion*).

Four Mexican varieties of this species are here figured. *L. pratensis* is a most variable species; but in all its protean forms I find the marginal spots to the cuneus and those at the pronotal angles to be perfectly constant. Some extreme varieties have the body beneath and the legs almost black.

2. **Lygus tactus,** n. sp. (Tab. XXVI. fig. 9.)

Ochraceous; apical third of second joint, base and apex of third joint, and the whole of fourth joint of antennæ, eyes and basal margin of head, two large anterior submarginal spots to pronotum and a subbasal marginal line to same, basal margin of scutellum, claval, inner, and sutural margins, a large posterior discal spot to corium, inner basal angle and apex of cuneus, basal angle and cellular margins of membrane, base and apex of rostrum, a series of obscure marginal and segmental spots to abdomen, apices of posterior femora and tarsal apices fuscous or black. The basal portion of pronotum, and the clavus and inner disk of corium is more or less infuscated, and the membrane possesses a large central and two lateral pale fuscous spots.

Var. *a*. With the discal spot to corium reduced in size and linear in shape.

Long. $5\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

3. **Lygus tribulis,** n. sp. (Tab. XXVI. fig. 10.)

Allied to *L. tactus*, but proportionately broader and stouter, and with the following colour differences, viz.:—the lateral margins of the pronotum are black, the scutellum has a very broad subquadrate central spot, the clavus has the apical third, and the corium an irregular transverse fascia black.

Long. 5 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

4. **Lygus sallæi.** (Tab. XXIII. figs. 2 & 3, var.)

Lygus sallèi, Stål, Stett. ent. Zeit. xxiii. p. 321. 249 [1].

Hab. MEXICO [1], Milpas in Durango (*Forrer*).

A typical specimen in the Stockholm Museum is represented by fig. 2, and a varietal specimen in the same collection by fig. 3.

5. **Lygus championi,** n. sp.

Ochraceous; basal margin of head, apex of second joint of antennæ, basal and lateral submarginal lines to pronotum, two small spots at claval apices (sometimes a small discal spot to corium and two small subapical spots to scutellum) black; posterior femora more or less distinctly apically annulated with fuscous; body beneath and legs concolorous, tarsal apices fuscous. Third and fourth joints of antennæ somewhat fuscous.

Long. $6\frac{1}{2}$ millim.

Hab. GUATEMALA, Quezaltenango and near the city of Guatemala (*Champion*).

6. **Lygus vinaceus,** n. sp. (Tab. XXVI. fig. 11.)

Pale olivaceous; eyes, a basal submarginal line to pronotum, a central basal longitudinal and a transverse

subapical fascia to scutellum, two contiguous spots at base and apex of claval suture, and a broad irregular transverse fascia to corium dark fuscous or black. Antennæ fuscous; base of first joint and base and apex of third joint luteous. Body beneath and legs pale olivaceous; lateral margins of the abdomen somewhat broadly infuscated; apices of femora more or less infuscated, those of the posterior femora somewhat distinctly biannulated; rostrum ochraceous, its apex black.

Long. $7\frac{1}{2}$ to 8 millim.

Hab. GUATEMALA, Totonicapam (*Champion*).

7. **Lygus inspersus,** n. sp. (Tab. XXIII. fig. 8.)

Pale greenish ochraceous; eyes and a number of minute spots irregularly scattered over the body, both above and beneath, fuscous. Legs and antennæ (the last with the third and fourth joints mutilated) pale greenish ochraceous, apices of tarsi fuscous or black.

Long. 6 millim.

Hab. MEXICO (*Deppe, Mus. Berol.*).

8. **Lygus scutellatus,** n. sp. (Tab. XXIII. fig. 9, & var. fig. 18.)

Pale ochraceous; eyes, two small contiguous spots at base of pronotum, inner claval margins and sutures, a small spot near each inner angle of corium, and a large basal spot to membrane fuscous (sometimes reddish). Antennæ black; base of first joint, a broad central annulation to second joint, and base of third joint ochraceous; scutellum pale shining greenish ochraceous. Head with a central longitudinal fascia and a marginal line in front of eyes; pronotum with two anterior linear spots, and scutellum with the base narrowly reddish. Body beneath pale ochraceous; abdomen with a submarginal reddish fascia; apces of tarsi and rostrum black.

Var. *a.* Pronotum with a broad subbasal fuscous fascia and the scutellum bright greenish.

Long. 5 milllim.

Hab. MEXICO (*Deppe, Mus. Berol.*), Presidio and Milpas (*Forrer*); GUATEMALA, San Gerónimo (*Champion*).

9. **Lygus cristatus,** n. sp. (Tab. XXIII. fig. 10.)

Closely allied to the preceding species, but differing by the scutellum possessing a broad central longitudinal reddish-brown fascia and a longitudinal spot at each inner angle of corium; the clavus is sometimes totally reddish brown (as in the specimen figured), or with its inner margin and suture only of that colour, as in *L. scutellatus*. The general colour varies from pale greenish to ochraceous.

Long. 5 millim.

Hab. MEXICO (*Deppe, Mus. Berol.*); GUATEMALA, San Gerónimo, Dueñas (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

A Mexican specimen is here figured.

PŒCILOCAPSUS.

Pœcilocapsus, Reuter, Öfv. Vet.-Ak. Förh. 1875, p. 73.

In this genus the body is glabrous and obsoletely and minutely punctured, the second joint of the antennæ being distinctly incrassated.

Dr. Reuter has divided his genus into two subgenera—*Pœcilocapsus* and *Metriorrhynchus*, the first of which is, according to our present knowledge, alone represented in this fauna. Its characteristics consist in having the basal joint of the antennæ not longer than the head, and the rostrum not passing the anterior coxæ.

1. **Pœcilocapsus alacer.** (Tab. XXIII. fig. 1.)

Brachycoleus alacer, Stål, Stett. ent. Zeit. xxiii. p. 319. 243[1].

Pœcilocapsus (*Pœcilocapsus*) *alacer*, Reuter, Öfv. Vet.-Ak. Förh. 1875, p. 74.

Hab. Mexico[1]; Guatemala, Cerro Zunil (*Champion*).

A typical specimen in the Stockholm Museum is here figured.

The Guatemalan examples received from Mr. Champion are much more brightly coloured than the Mexican type; but, although the head is more distinctly red, the coxæ are almost concolorous with the body. The antennæ (not described by Stål) have the first joint blackish with its extreme base pale brownish, second joint pale brownish with the apical half blackish, third and fourth joints pale fuscous.

2. **Pœcilocapsus agrarius,** n. sp.

Piceous; head, an irregular anterior transverse fascia to pronotum, basal margin (narrowly) of pronotum, lateral margins of corium and cuneus (broadly), apical half of membrane, tibiæ, and tarsi more or less brownish or ochraceous.

Var. *a*. Pronotum (excluding base) brownish or ochraceous.

Var. *b*. Head, pronotum, and corium greenish ochraceous.

Long. 6 millim.

Hab. Guatemala, Totonicapam (*Champion*).

It is quite probable that this species may represent but varietal forms of the preceding *P. alacer*, Stål. The material now before me, however, does not allow me to adopt this conclusion.

3. **Pœcilocapsus frumentarius,** n. sp. (Tab. XXVI. fig. 12.)

Bright ochraceous; antennæ, a broad arcuated fascia commencing at claval apex, and occupying inner apical margin of corium and part of inner margin of cuneus, basal half of membrane, and abdomen beneath black; tibiæ fuscous, posterior tibiæ with a broad basal ochraceous annulation.

Long. 7 millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

4. **Pœcilocapsus nigriger.** (Tab. XXII. figs. 12 & 13, vars.)

Brachycoleus nigriger, Stål, Stett. ent. Zeit. xxiii. p. 319. 244[1].

Pœcilocapsus (*Pœcilocapsus*) *nigriger*, Reut. Öfv. Vet.-Ak. Förh. 1875, p. 74.

Hab. Mexico[1] (*Deppe, Mus. Berol.*).

This species is subject to considerable variation in colour and markings. The colour varies from ochraceous to greenish, as the two specimens here figured sufficiently indicate. Fig. 13 represents a variety which apparently possesses the maximum in dark macular marking. In fig. 12 the submarginal black stripe to the lateral sides of the pronotum is absent, and the black fasciæ to the corium are attenuated; whilst in a specimen kindly forwarded to me by Dr. Signoret, the corium merely possesses a claval oblique fascia and two discal spots, being the "var. *b*" as described by Stål.

5. **Pœcilocapsus ornatulus.** (Tab. XXVII. figs. 1, 2, 3, & 4.)

Brachycoleus ornatulus, Stål, Stett. ent. Zeit. xxiii. p. 319. 245 [1].
Capsus decoratus, Walk. Cat. Het. vi. p. 100. n. 185 [2].

Hab. Mexico [1] (*coll. Sign.*), Orizaba [2]; Guatemala, Zapote, Cerro Zunil (*Champion*).

This is a very variable species. Figs. 1 & 2 represent Mexican forms in the collection of Dr. Signoret, and exhibit the maximum of melanism. Figs. 3 & 4, on the contrary, portray the extreme of albinic variation, and represent Guatemalan specimens.

NEOBORUS, gen. nov.

Body shining, pilose, and punctate. Head almost vertical, very broad across the eyes, which are very prominent. Antennæ with the basal joint about as long as, or a little longer than, the head and very slightly incrassated, the second joint about twice as long as the first, very slightly thickened towards apex. Pronotum long, its length generally almost equalling its breadth, the lateral margins nearly straight, being only very slightly concave about centre; posterior margin moderately convex. Corium with the margins slightly dilated and convex. Rostrum reaching the intermediate coxæ.

Neoborus has some superficial affinities with *Systratiotus*, Dougl. & Scott, a genus recorded by Dr. Reuter as occurring in Texas.

1. **Neoborus saxeus,** n. sp. (Tab. XXVII. fig. 5.)

Ochraceous, coarsely punctate; anterior and posterior margins of the pronotum very narrowly luteous; scutellum luteous, with a central basal piceous spot; eyes, an anterior transverse rugosity to pronotum, clavus, and costal margin of corium pale castaneous; corium with a pitchy spot before inner base of cuneus, which is luteous; membrane piceous; body beneath and legs ochraceous, apices of the femora more or less castaneous, apices of the tarsi piceous. Basal joint of the antennæ black; base and apex of rostrum piceous. The pronotum and corium are coarsely and the scutellum sparingly punctate.
Long. $4\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

2. **Neoborus scaber,** n. sp. (Tab. XXVII. fig. 6.)

Allied to the last species but larger, paler in hue; the eyes black; scutellum with the whole disk piceous; clavus (excluding extreme apex) and corium (excluding two pale linear fasciæ) infuscated; cuneus infuscated, its outer margin and apex luteous; membrane piceous; body beneath and legs pale ochraceous; margins of sternum and abdomen piceous; femora and legs more or less annulated with brownish; apices of the tarsi piceous; antennæ black, base of the first and basal half of the third joint luteous.
Long. 5 millim.

Hab. Guatemala, Cerro Zunil (*Champion*).

3. **Neoborus hirsutus,** n. sp. (Tab. XXVII. fig. 7.)

Head and pronotum ochraceous; eyes and a central longitudinal line to head, two subbasal transverse streaks, and some anterior lineate marks to pronotum, scutellum, and corium shiny fuscous; cuneus reddish, its apex and margins luteous; membrane fuscous, the cellular margins ochraceous; legs and antennæ ochraceous. (Body beneath imperfectly seen, owing to the specimen being carded.)
Long. 5 millim.

Hab. Guatemala, Pantaleon (*Champion*).

In this species the pronotum is somewhat shorter and broader at the base than in the two preceding species, thus attaining a subgeneric position.

EUBATAS, gen. nov.

Apparently allied to *Euarmosus*, Reuter. Body shining, moderately pilose, the corium somewhat strongly pilose. Antennæ with the basal joint moderately incrassated, about the length of the head and sparingly pilose; second joint very strongly pilose, gradually incrassated from base, and about, or a little more than, twice the length of the first; third and fourth slender, sparingly pilose and together about equal in length to the second. Eyes contiguous to the pronotum. Pronotum with the base truncate at area of scutellum, the lateral angles posteriorly oblique, and breadth at same more than twice that of anterior margin. Scutellum with a distinct apical carination. Femora glabrous, tibiæ setiform. Rostrum reaching the intermediate coxæ.

1. **Eubatas chiriquinus,** n. sp. (Tab. XXVII. fig. 8.)

Head, pronotum, scutellum, and base of corium to near apex of scutellum reddish ochraceous, remainder of corium dark bluish; cuneus pale testaceous, with the base dark bluish; membrane fuscous; antennæ testaceous, second joint (excluding extreme base) and eyes blackish; head beneath, sternum, and legs reddish-ochraceous, abdomen purplish black; apices of the tibiæ and tarsi infuscated.

Long. $4\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

NEOCAPSUS, gen. nov.

Allied to the preceding genus, but with the rostrum reaching the posterior coxæ. Antennæ with the second joint twice as long as the first, but not strongly incrassated or pilose.

Body shiny, punctate and pilose. Pronotum with the lateral angles obliquely rounded, and between them more than twice as broad as at anterior margin. Tibiæ strongly setiform.

1. **Neocapsus mexicanus.** (Tab. XXII. fig. 19.)

Pronotum reddish ochraceous; head, antennæ (third and fourth joints mutilated), anterior collar and transverse basal fascia to pronotum, scutellum, corium, and cuneus piceous; membrane pale fuscous; body beneath and legs (anterior and posterior legs mutilated) dark testaceous or pale piceous; lateral margins of prosternum reddish ochraceous.

Long. 7 millim.

Hab. Mexico (*Deppe, Mus. Berol.*).

HORCIAS, gen. nov.

Body convex, shining, impunctate, very slightly and obsoletely pilose. Head smooth. Eyes large, prominent, and contiguous to anterior margin of pronotum. Antennæ with the basal joint slightly incrassated and about as long as the head; second joint nearly twice as long as the first with its apex slightly incrassated, third and fourth slender. Rostrum reaching the intermediate coxæ. Pronotum with a distinct anterior collar, its basal half convex and deflected to anterior margin, which is about half the width of the base between the lateral angles. Scutellum moderately tumid. Tibiæ setiform.

1. **Horcias variegatus,** n. sp. (Tab. XXVI. fig. 13.)

Bright ochraceous; eyes, apex of head, a basal fascia (widest at centre) to pronotum, a central longitudinal fascia (sometimes absent) to scutellum, clavus, lateral fascia to corium (which does not quite reach outer margin at base, is very broad at apex, and there transversely connected with claval apex), and inner base and apex of cuneus, black. Antennæ ochraceous; basal annulations to and apical half of first and second joints, apex of third joint, and basal annulation to and apex of fourth joint black.

Body beneath and legs ochraceous; femora with their apices more or less testaceous, anterior and intermediate

tibiæ with a central, and posterior tibiæ with two (one near centre, and one near apex) pale ochraceous annulations, and their apical halves always darker or fuscous; tarsi pale ochraceous, with their apices black.

Long. 4½–5 millim.

Hab. PANAMA, David and Bugaba (*Champion*).

2. **Horcias notatus,** n. sp. (Tab. XXVI. fig. 14.)

Ochraceous; eyes, apex of head, a large central basal spot to pronotum, clavus (excluding base), lateral margins of corium, commencing a short distance from base and extending to about centre, where it is transversely continued in an oblique fascia to apex of clavus, inner base and apex of cuneus, black; membrane pale ochraceous, the cellular margins black. Antennæ ochraceous; basal annulations to, and apical halves of first and second joints, and apex of third joint black; fourth joint fuscous, with a pale basal annulation. Body beneath and legs ochraceous; femora with obscure apical dark annulations; tibiæ darker, with two distinct pale annulations; tarsal apices black.

Long. 5 millim.

Hab. GUATEMALA, Pantaleon (*Champion*); PANAMA, David (*Champion*).

3. **Horcias thoracicus,** n. sp. ~~(Tab. XXVI. fig. 15.)~~

Head and pronotum reddish ochraceous; scutellum and corium bluish black; cuneus purplish; antennæ ochraceous, first joint (excluding extreme base), basal annulations to, and apical halves of, second and third joints, and the fourth joint fuscous or black; membrane fuscous; sternum beneath and legs reddish ochraceous (abdomen mutilated); tibiæ darker, anterior and intermediate tibiæ with a central, and posterior tibiæ with two (one near centre, and one near apex) pale annulations; tarsi pale ochraceous, their apices black.

Long. 5 millim.

Hab. PANAMA, Bugaba (*Champion*).

4. **Horcias chiriquinus,** n. sp. (Tab. XXVI. fig. 15).

Allied to the last species, but differing in the following particulars:—Head black; eyes very pale fuscous; antennæ as in *H. thoracicus* but darker, the third joint (excluding base) wholly black, fourth joint mutilated; pronotum with the basal margin bluish black; body beneath bluish black, prosternum ochraceous; legs dark castaneous, intermediate tibiæ with a central, and posterior tibiæ with two (one near base, and one near apex), pale annulations; tarsi pale ochraceous, their apices black.

Long. 5 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

5. **Horcias scutellatus,** n. sp.

Black; pronotum (excluding a broad black basal margin) and scutellum ochraceous. Antennæ black, the bases of the joints narrowly ochraceous. Body beneath, with the head, sternum, and legs ochraceous, the abdomen blackish; intermediate tibiæ with a central, and posterior tibiæ with two (one near base, and one near apex) pale annulations; tarsi pale ochraceous, with their apices black.

Long. 4½–5 millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

6. **Horcias decoratus,** n. sp. (Tab. XXVII. fig. 9.)

Reddish ochraceous; a pronotal basal fascia (broadest at centre) and the corium castaneous; scutellum luteous, with a large central basal castaneous spot, and the apex of the same colour; cuneus pale castaneous;

membrane pale fuscous; eyes black; antennæ brownish, extreme bases of the joints luteous, a basal annulation and apical half of the second joint blackish. Body beneath with the head, sternum, and legs reddish ochraceous, abdomen blackish; anterior and intermediate tibiæ with a central pale annulation (posterior tibiæ imperfectly seen, owing to specimen being carded); tarsi ochraceous, their apices fuscous.
Long. 5 millim.

Hab. GUATEMALA, Zapote (*Champion*).

7. **Horcias plagosus,** n. sp. (Tab. XXVI. fig. 16.)

Ochraceous; scutellum luteous, with a central castaneous fascia; inner area of clavus, and a broad lateral fascia (commencing a short distance from base, not reaching costal margin, widened and inwardly curved before apex, where it contains a small ochraceous spot, and terminating at inner base of cuneus) to corium, bright castaneous; outer margin of clavus fuscous; cuneus pale ochreous, a quadrate spot near inner basal angle and the apex bright castaneous; membrane pale brownish, with waved pale fuscous fasciæ; eyes black; antennæ black or fuscous, bases of the joints, a central annulation to the second joint, and the whole central portion of the fourth joint ochraceous. Body beneath and legs ochraceous; femora with some obscure castaneous apical annulations; tibiæ with their bases more or less castaneous and biannulated with the same colour; tarsi ochraceous, their bases and apices fuscous.
Long. 5 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

8. **Horcias plumatus.** (Tab. XXVII. fig. 10.)

Allied to the preceding species, but differing in the following particulars:—The antennæ are black, the bases of the first and third joints being alone ochraceous; the inner claval area and outer claval margin are dark fuscous; the corium is uniformly ochraceous, with a dark fuscous spot at inner apical angle; membrane pale fuscous, the cellular margins and apex piceous; body beneath and legs pale ochraceous, posterior femora with apical castaneous annulations, posterior tibiæ with the bases piceous; tarsi pale ochraceous, with their apices fuscous.
Long. $4\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

9. **Horcias rutilus,** n. sp. (Tab. XXVII. fig. 11.)

Pronotum and scutellum pale sanguineous, basal margin of pronotum and the corium pale castaneous; head piceous; eyes black; antennæ piceous, bases of the joints luteous, second joint with a broad ochraceous annulation near base; membrane pale fuscous. Body beneath and legs pale sanguineous; apices of tibiæ infuscated, intermediate tibiæ with a central, and posterior tibiæ with two (one near centre, and one near apex) pale ochraceous annulations; tarsi pale ochraceous, their apices fuscous.
Long. 5 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

10. **Horcias unicolor,** n. sp. (Tab. XXVII. fig. 12.)

Very pale sanguineous; eyes and antennæ black, the last with the joints narrowly ochraceous at their base (fourth joint mutilated); corium with a submarginal ochraceous fascia commencing about centre and terminating in inner base of cuneus, which also has the apex fuscous; membrane smoky ochraceous, with pale fuscous suffusions; body beneath and legs very pale sanguineous; coxæ more or less ochraceous, apices of the tarsi piceous.
Long. $5\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

11. **Horcias atratus,** n. sp.

Black; membrane fuscous; eyes luteous; antennæ black, bases of the joints (third and fourth joints mutilated luteous, second joint with a broad brownish annulation near base; body beneath and legs black, intermediate tibiæ with a central, and posterior tibiæ with two (one central and one near apex) pale ochraceous annulations; tarsi pale ochraceous, their apices black.

Long. 5 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

CALOCORISCA, gen. nov.

Scutellum tumid and convexly gibbous, apical third deflexed, apex globosely suberect. Body finely pilose. Pronotum punctate and subrugulose, twice as broad posteriorly as at anterior margin, lateral angles rounded and from thence obliquely angulated to angles of scutellum, where the posterior margin is truncate. Eyes large and prominent. Head moderately slender, transversely striate and with a faint central longitudinal sulcation. Antennæ slender, moderately and finely pilose; basal joint but little longer than the head, second more than twice the length of the first, and gradually incrassated towards apex; third and fourth attenuated and together shorter than the second. Rostrum about reaching the intermediate coxæ. Membrane more or less distinctly reticulated.

1. **Calocorisca villosa,** n. sp. (Tab. XXVI. fig. 17.)

Greenish ochraceous; a basal fascia to pronotum and the scutellum and corium mottled with fuscous, membrane greenish ochraceous, with a large basal fuscous spot, and fuscous reticulations on apical half; antennæ ochraceous, third and fourth joints more or less fuscous; eyes black; pronotum with two small, shining black, macular callosities near anterior margin; corium with the lateral margin distinctly spotted with fuscous, and with an obscure linear discal fuscous spot; cuneus fuscous, the apex and lateral margin ochraceous, the last spotted with fuscous; body beneath and legs ochraceous, lateral margins of the body broadly fuscous; annulations to femora and apices of tibiæ and tarsi fuscous.

Long. 7 millim.

Hab. GUATEMALA, Senahu, Capetillo (*Champion*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

2. **Calocorisca thoracica,** n. sp. (Tab. XXVII. fig. 13.)

Pale ochraceous; eyes, two posteriorly attenuated spots at anterior margin, and a transverse fascia at base of pronotum, scutellum, corium, and cuneus fuscous; lateral margins of corium spotted with pale ochraceous, lateral margin and apex of cuneus more or less ochraceous; membrane smoky subhyaline, with fuscous suffusions; body beneath and legs much as in preceding species, but the tibiæ thickly annulated with brownish; antennæ with the first and second joints ochraceous, third fuscous (fourth mutilated).

Long. 9½ milllim.

Hab. COSTA RICA, Irazu (*Rogers*).

3. **Calocorisca tenera,** n. sp. (Tab. XXVI. fig. 18.)

Pale ochraceous, more or less mottled with fuscous; eyes, and third and fourth joints of antennæ fuscous; two shining black rounded macular callosities near anterior margin of pronotum; scutellum with a more or less distinct central longitudinal fuscous line; cuneus distinctly darker and more or less fuscous; membrane smoky subhyaline, mottled with pale fuscous; body beneath and legs ochraceous; lateral margins of the body more or less infuscated, annulations to femora and apices of tibiæ and tarsi fuscous.

Long. 7–8 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

4. **Calocorisca antennata,** n. sp. (Tab. XXVII. fig. 14.)

Head, pronotum, and scutellum ochraceous; eyes and a central linear fascia to head, broad basal, lateral, and central fasciæ to pronotum, basal, central, and lateral fasciæ to scutellum fuscous or black; apex of scutellum shining pale ochraceous; corium pale castaneous, a longitudinal claval line, a large discal spot, and a series of small spots on lateral margins fuscous or black; cuneus dark fuscous, its apex and a series of spots on lateral margin ochraceous; membrane obscure ochraceous, with fuscous reticulations; antennæ fuscous, the basal joint ochraceous; body beneath ochraceous, apparently (*carded specimen*) clouded with fuscous; legs ochraceous; femora and tibiæ annulated with fuscous; apices of the tarsi fuscous.

Long. 9 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

CIMATLAN, gen. nov.

Allied to *Calocorisca*, but differs in having the body flatter, more ovate, shining, and thickly punctate. Scutellum only slightly tumid, the apex depressed. Pronotum coarsely punctate, with the lateral margins nearly straight, not sinuated. Head and antennæ generally as in *Calocorisca*. Membrane semihyaline, not reticulated. Rostrum just passing the intermediate coxæ.

1. **Cimatlan delicatum,** n. sp. (Tab. XXVII. fig. 15.)

Head ochraceous, spotted and striated with fuscous; eyes fuscous; antennæ ochraceous, apical half and sometimes the whole of the second joint fuscous; pronotum black, anterior and lateral margins and a small central spot at base ochraceous; scutellum black, basal angles and apex luteous and levigate; corium and cuneus ochraceous, thickly mottled with fuscous; apex of cuneus fuscous; membrane smoky subhyaline, cellular margins fuscous; body beneath ochraceous, thickly mottled with fuscous; legs ochraceous, annulated with fuscous.

Var. *a*. Head with the disk fuscous; second, third, and fourth joints of antennæ more or less fuscous.

Long. 7–8½ millim.

Hab. GUATEMALA, Capetillo, Panajachel (*Champion*).

FULVIUS.

Fulvius, Stål, Stett. ent. Zeit. xxiii. p. 322 (1862); Walk. Cat. Het. vi. p. 47 (1873).

This genus is very distinct from those to which it is in this work allied, being distinguished by the more elongate body, the elongately produced head, the pronotum as described by Stål ("thorax leviter transversus, trapezoideus, basi truncatus, callis leviter elevatis, margine antico haud calloso," &c.).

Species of this genus are found running actively on the surface of fungoid growths attached to fallen timber (*Champion*).

1. **Fulvius anthocorides.** (Tab. XXIII. fig. 15.)

Fulvius anthocorides, Stål, Stett. ent. Zeit. xxiii. p. 322. 253[1].

Hab. MEXICO [1]; GUATEMALA, Balheu (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 4000 feet, Bugaba, David (*Champion*).

Panama specimens collected by Mr. Champion differ from typical Mexican specimens (one of which, in the Stockholm Museum, is here figured) by the less variegated corium.

The examples from Panama have also, usually, a white spot on the corium extending from the lateral margin to about the centre of the claval margin; but intermediate forms exist in which this spot is subobsolete.

Of the antennæ (not described by Stål) the basal joint is castaneous, the second joint darker but with its apical third whitish, the remaining joints slender and pale fuscous.

2. **Fulvius albomaculatus,** n. sp. (Tab. XXVII. fig. 16.)

Head black; antennæ with the first joint ochraceous, its base narrowly piceous; second joint ochraceous, its centre piceous and its apical third whitish; third and fourth joints fuscous; pronotum black, its base, which has its centre piceous, reddish; scutellum black; corium pale whitish ochraceous, base of costal margin, apical third, and clavus (excluding apex) black; cuneus blackish, with a large basal roseate spot; membrane very pale fuscous and semihyaline, cellular margins darker. Body beneath blackish; coxæ (excluding base) luteous; femora reddish ochraceous, tibiæ brownish, tarsi luteous.
Long. 4 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

3. **Fulvius fuscans.** (Tab. XXVII. fig. 17.)

Head and pronotum brownish ochraceous; head with the eyes and lateral margins, pronotum with a central basal spot, to which are attached two central spots terminating in a transverse fascia (enclosing two pale spots), the lateral margins, and a small spot on each side near base of corium dark fuscous; scutellum dark fuscous, the apical third pale ochraceous; corium brownish ochraceous, mottled with fuscous, and with two lateral marginal whitish spots, one at base and one near centre; cuneus fuscous, with a large transverse and somewhat lunate whitish spot; membrane pale fuscous, the cellular margins darker. Body beneath imperfectly seen (*carded specimen*); legs dark brownish; femora with broad central and narrow apical paler annulations; bases of tibiæ, and the tarsi ochraceous; antennæ with the basal joint brownish ochraceous, its apex narrowly paler; second joint blackish, third and fourth joints fuscous.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Balheu (*Champion*).

4. **Fulvius atratus.** (Tab. XXVII. fig. 18.)

Black; corium with a subbasal transverse whitish fascia terminating at centre of outer claval margin; cuneus testaceous, inner basal angle and apex black; membrane blackish, its apical half pale fuscous; femora brownish ochraceous, with their bases piceous; tibiæ pale fuscous, tarsi ochraceous; antennæ with the first joint brownish ochraceous, its base piceous; second joint black, third and fourth joints fuscous.
Long. 4 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

HENICOCNEMIS.

Henicocnemis, Stål, Rio Jan. Hem. p. 53 (1858).
Hemicocnemis, Walk. Cat. Het. vi. p. 47 (1873).

This genus is particularly characterized by the compressed and dilated anterior tibiæ; the posterior femora are also compressed.

According to our present knowledge, *Henicocnemis* is confined to the Neotropical Region.

1. **Henicocnemis albitarsis.** (Tab. XXVII. fig. 19.)

Henicocnemis albitarsis, Stål, Stett. ent. Zeit. xxiii. p. 320. 248[1].

Hab. Mexico[1].

A typical specimen in the collection of Dr. Signoret is here figured.

2. **Henicocnemis albo-ornata,** n. sp. (Tab. XXVII. fig. 20.)

Black, clothed with white pile; pronotum with two foveate black spots on anterior portion of disk; antennæ ochraceous; apical thirds of the first, second, and third joints and the whole of the fourth joint fuscous; legs dark castaneous or black, and clothed with white pile; intermediate tibiæ with one and posterior tibiæ with two pale ochraceous annulations; tarsi pale ochraceous, with their apices black; membrane piceous, apices of the cellular margins whitish, and with a whitish spot on each lateral margin.

Long. 4–4½ millim.

Hab. Panama, Bugaba (*Champion*).

This species seems to be closely allied to *H. patellata*, Stål, a species described from Rio Janeiro. From the description of Stål's species, it differs by its smaller size, the foveate spots to the pronotum, its white pilosity, different colour of the antennæ, &c.

Division **BRYOCORARIA.**

Bryocoraria, Reuter, Bih. Vet.-Ak. Handl. iii: 1, p. 6 (1875).
Cyllocoraria, Reuter, Bih. Vet.-Ak. Handl. iii: 1, p. 6 (1875).
Cyllecoraria, Reuter, Öfv. Vet.-Ak. Förh. 1875, p. 79.

As I do not, at present, clearly apprehend the distinction, in all cases, of the above divisions proposed by Dr. Reuter, I have, to prevent confusion, and in conformity with the course pursued at p. 212 of this work when dealing with some of the late Dr. Stål's divisions, placed them together. In doing this I have no wish or intention to disparage the validity of Dr. Reuter's work; but as this publication is primarily "faunistic" in character, I should, had I adopted that author's systematic proposals, been compelled to make even further divisional separation of genera.

The antennæ being not quite so wide apart as the eyes, appears to be the strongest structural difference of the division as here used.

ECCRITOTARSUS.

Eccritotarsus, Stål, Rio Jan. Hem. i. p. 57 (1858); Walk. Cat. Het. vi. p. 47 (1872).

The following is Stål's complete diagnosis of this genus:—"Corpus formâ variabile, ovale, oblongum, vel elongatum. Membrana unicellulata. Tarsi basi gracillimi apicem versus sensim latiores, crassiores."

a. *Body subelongate. Pronotum not prominently gibbous.*

1. **Eccritotarsus generosus.** (Tab. XXII. fig. 24.)

Eccritotarsus generosus, Stål, Stett. ent. Zeit. xxiii. p. 323. 254[1].
Eccritotarsus eucosmus, Stål, Stett. ent. Zeit. xxiii. p. 323. 255[2].

Hab. Mexico[1 2] (*coll. Sign.*); Guatemala, Zapote, San Isidro (*Champion*).

A typical specimen of *E. generosus* in the Stockholm Museum is here figured, with which I have compared typical specimens of *E. eucosmus* in the collection of Dr. Signoret, and have come to the conclusion that differential characters do not exist, sufficient at least to denote more than one species.

2. **Eccritotarsus nigripes,** n. sp.

Dark bluish black; head (both above and beneath) and pronotum sanguineous; the eyes vary in colour from sanguineous to greyish ochraceous; the body above is distinctly and finely punctate.
Var. *a*. Basal joint of the antennæ and basal margin of the scutellum sanguineous.
Long. $4\frac{1}{2}$ millim.

Hab. Mexico, Ciudad (*Forrer*); Guatemala, Cubilguitz (*Champion*).

3. **Eccritotarsus genetivus,** n. sp. (Tab. XXII. fig. 25.)

Head and pronotum reddish ochraceous; scutellum, corium, and body beneath piceous; membrane fuscous; coxæ and legs luteous, apices of the posterior femora and apices of the tarsi fuscous; rostrum luteous, its apex piceous; antennæ with the basal joint ochraceous; second joint piceous, remaining joints mutilated.
Long. $4\frac{1}{2}$ millim.

Hab. Mexico (*Deppe, Mus. Berol.*).

4. **Eccritotarsus splendens,** n. sp. (Tab. XXVIII. fig. 1.)

Dark shining bluish; head, pronotum, sternum, and legs luteous; antennæ piceous, base of the first joint luteous; rostrum luteous, with its apex piceous; eyes blackish; legs with an upper linear streak to anterior femora, a subapical broad annulation to intermediate and posterior femora, basal and central annulations to tibiæ, and base and apex of tarsi fuscous; membrane smoky subhyaline, its basal cellular area piceous.
Long. $4\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

In this species the eyes are large and considerably recurved; the antennal joints are uniform, and not distinctly incrassated.

5. **Eccritotarsus vestitus,** n. sp. (Tab. XXVIII. fig. 2.)

Ochraceous; antennæ, membrane, tibiæ, and tarsi piceous; scutellum, clavus (excluding base), and inner margins of corium bluish black; apical margin of the membrane smoky hyaline. The ochraceous colouring of the corium is more rufous than that of the head and pronotum.
Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, Pantaleon (*Champion*).

The antennæ in this species are distinctly pilose, and the apex of the basal joint distinctly incrassated.

6. **Eccritotarsus mundulus.** (Tab. XXIII. fig. 19.)

Eccritotarsus mundulus, Stål, Stett. ent. Zeit. xxiii. p. 323. 257 [1].

Hab. MEXICO [1].

A typical Mexican specimen in the Stockholm Museum is here figured.

b. *Body ovate. Pronotum prominently gibbous.* = Pycnoderes Guér.

7. **Eccritotarsus pallidirostris.** (Tab. XXIII. fig. 14.)

Eccritotarsus pallidirostris, Stål, Stett. ent. Zeit. xxiii. p. 323. 256 [1].

Hab. MEXICO [1]; GUATEMALA, San Gerónimo, San Isidro (*Champion*).

The Guatemalan examples of this species differ slightly from the Mexican typical specimen (in the Stockholm Museum) here figured by the darker margins of the cuneus.

8. **Eccritotarsus incurvus,** n. sp. (Tab. XXVI. fig. 19.)

Black, more or less clothed with greyish pile; antennæ, two marginal spots to corium (one near base and one at apex), and legs pale luteous; third and fourth joints of antennæ somewhat infuscated; vertex of head sometimes more or less ochraceous; eyes dark castaneous; cuneus pale ochraceous hyaline, basal margin irregularly piceous; membrane pale ochraceous hyaline, cellular margins piceous; posterior femora with a broad fuscous apical annulation; apices of the tibiæ fuscous.

Long. 3–3½ millim.

Hab. GUATEMALA, San Gerónimo, Cerro Zunil (*Champion*).

9. **Eccritotarsus gibbus,** n. sp.

Eccritotarsus incurvus, var. ?

Closely allied to *E. incurvus,* but differing by having the first and second joints of the antennæ black; the first pale marginal spot to the corium reaching base, and the second entirely absent; cuneus with some linear waved piceous markings at base. Other characters as in *E. incurvus.*

Long. 3½ millim.

Hab. GUATEMALA, Senahu (*Champion*).

Only a single specimen of this presumed species has been received; but it is probable that intermediate forms exist between it and the typical form of *E. incurvus.*

10. **Eccritotarsus atratus,** n. sp. (Tab. XXVI. fig. 20.)

Black; antennæ with the basal joint black, second and third joints luteous, the third with its apical portion infuscated, fourth joint fuscous; corium with a pale ochraceous apical spot; cuneus pale ochraceous hyaline, its basal margin and apex piceous; membrane pale ochraceous hyaline, its cellular margins and

a central longitudinal fascia piceous; legs very dark castaneous; coxæ, base of posterior femora, and the tarsi luteous; apices of the tarsi fuscous.

Long. $2\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

PSEUDOBRYOCORIS, gen. nov.

Allied to *Eccritotarsus* (as represented by *E. pallidirostris*), but differing by the pronotum being convexly produced at base and almost completely covering the scutellum, body more elongate, and margins of the corium subparallel.

1. **Pseudobryocoris bicolor,** n. sp. (Tab. XXVIII. fig. 3.)

Pale luteous; first and second joints of the antennæ, head, pronotum, scutellum, clavus, a central transverse fascia to corium (inwardly broadest at claval apex), apical margin of cuneus, cellular area of membrane, head beneath and sternum, and an apical annulation to posterior femora black or fuscous; extreme base of first joint of antennæ and anterior collar to pronotum luteous; apices of the tarsi fuscous. The body above is obscurely pilose, the pronotum coarsely punctate, and the clavus more obscurely punctate; the first and second joints of the antennæ are stoutest, and the second almost twice as long as the first.

Long. $3\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

MONALOCORISCA, gen. nov.

Body broad, robust, coarsely punctate; pronotum and scutellum rugulose. Antennæ with the first joint slightly incrassated and a little shorter than the head; second joint rather more than twice as long as the first; third about half as long as second, longer than fourth. Eyes large and globular, slightly deflected on anterior collar of pronotum. Pronotum moderately gibbous; its lateral angles very slightly subnodulose, its posterior margin narrowly levigate, irregularly convex, and more than twice the breadth of the anterior collar, which is also levigate. Scutellum broad, the lateral margins very slightly convex near base; clavus large and broad; corium with the lateral margins slightly dilated and convexly ampliated; cuneus with the angular fracture abrupt. Membrane with two cells. Rostrum about reaching the intermediate coxæ.

1. **Monalocorisca granulata,** n. sp. (Tab. XXVIII. fig. 4.)

Luteous, punctured and mottled with ochraceous; anterior collar and posterior margin of pronotum and an outer submarginal linear fascia to clavus pale and levigate; eyes pale brownish; antennæ black, extreme base of first joint and a broad central annulation to second joint dark ochraceous; basal margin of scutellum, an irregular spot near apical sutures of clavus, some large and irregular mottled markings on apical half of corium, and some small outer marginal spots to same, castaneous brown; cuneus pale ochraceous brown, its apex and lateral margins paler; membrane fuscous, the cellular margins pale luteous; legs ochraceous, apices of the tarsi fuscous.

Long. 4 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

2. **Monalocorisca ravida,** n. sp. (Tab. XXVIII. fig. 5.)

Uniformly dull ochraceous; eyes somewhat paler; antennæ with the first joint black, its extreme base ochraceous; second joint ochraceous, its extreme base and apical half fuscous (remainder mutilated); cuneus

with a dark fuscous spot at inner angle; membrane pale brownish, the basal angle and apical third dark fuscous; legs ochraceous, femora and tibiæ annulated with brownish.
Long. 4 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This species not only differs from *M. granulata* by the above described colour-differences, but has the posterior margin of the pronotum much more prominently convex and the lateral pronotal angles more distinctly subnodulose; the pronotum and scutellum are also less rugulose than in the preceding species.

CARNUS, gen. nov.

Body convex, glabrous, shining. Head moderately convex, smooth. Antennæ with the basal joint not quite as long as the head; second joint about twice as long as the first, its apical half incrassated; third and fourth slender, and together either almost equal to or more or less shorter than the second. Pronotum coarsely punctate, elongate, with a broad distinct anterior collar preceded by a transverse impression; the anterior margin about one third the width of posterior margin, which is either convexly rounded or truncate. Scutellum somewhat tumid, shining, and glabrous. Corium somewhat convexly dilated. Rostrum reaching the intermediate coxæ. Tibiæ indistinctly setose.

a. *Posterior margin of the pronotum convex.*

1. **Carnus lunatus,** n. sp. (Tab. XXVIII. fig. 6.)

Ochraceous; posterior margin of pronotum, clavus, a transverse fascia to corium near claval apex, posterior portion of outer margin to corium and outer margin and apex of cuneus sanguineous; apical half of the second joint of antennæ, anterior collar and a central basal spot to pronotum, central base of scutellum, a broad central spot to clavus, and basal half of membrane black; scutellum pale luteous, the extreme apex black, and the black central base giving it a lunate appearance; body beneath and legs ochraceous.
Var. *a*. Eyes black; scutellum without the black basal spot.
Var. *b*. Resembling var. *a*, but pronotum without the black basal spot.
Long. 4 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet, Bugaba (*Champion*).

2. **Carnus formosus,** n. sp.

Allied to the preceding species, but differing by the more elongate body. Eyes black; anterior collar to pronotum reddish ochraceous; posterior margin of pronotum pale luteous, with a small central black spot; scutellum with a smaller black central base and the apex concolorous; clavus with the apex only sanguineous; corium without the transverse sanguineous fascia; sternum with a black spot between anterior and intermediate coxæ.
Var. *a*. Pronotum with a small black spot on each lateral margin, these spots linearly connected with the basal spot.
Long. 3½–4 millim.

Hab. PANAMA, Volcan de Aittlan 2500 to 3000 feet (*Champion*).

3. **Carnus parvus,** n. sp. (Tab. XXVIII. fig. 7.)

Pale ochraceous; central longitudinal fascia to and base of head, broad subbasal and sublateral fasciæ, and narrow anterior marginal fascia with connecting central fascia to pronotum reddish ochraceous; clavus and corium

reddish ochraceous, the last with the disk paler, and with the anterior half of lateral margin and an apical spot levigate pale ochraceous; eyes, apex of second joint of antennæ, and third and fourth joints (excluding bases) black; cuneus reddish; membrane pale brownish ochraceous and semihyaline, the cellular margins brownish; head beneath and sternum reddish ochraceous; abdomen, metasternum, and centre of mesosternum (*carded specimen*) black; legs ochraceous.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Las Mercedes (*Champion*).

b. *Posterior margin of the pronotum truncate.*

4. **Carnus funebris,** n. sp.

Bright greenish black; basal half of head, antennæ, rostrum, and legs ochraceous; rostrum with the apex piceous; antennæ with the apex of the second joint luteous (third and fourth joints mutilated); pronotum very coarsely punctate; membrane fuscous, cellular margins pale brownish; abdomen beneath having the transverse segmental margins somewhat paler.

Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

PSEUDOCARNUS, gen. nov.

Differing from *Carnus* by having the basal joint of the antennæ longer than the head and incrassated; second joint about twice as long as the first; third and fourth joints very short, and together scarcely or about as long only as the first joint. Pronotum obscurely punctate.

1. **Pseudocarnus lineolatus,** n. sp. (Tab. XXVIII. fig. 8.)

Ochraceous; antennæ with the basal joint reddish; apical fourth of second joint, the third joint and fourth joint (excluding base and apex) castaneous; eyes silvery grey; pronotum with the posterior margin pale sanguineous, the lateral posterior margins black; inner (excluding base) and sutural margins of clavus, a basal streak and submarginal fascia (deflected at centre and angularly continued to near claval apex) to corium black; cuneus with the lateral margins and apex sanguineous; membrane pale fuscous and semihyaline, the cellular margins black. Body beneath and legs ochraceous, basal lateral margins of prosternum black.

Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

This species is peculiar by the great length of the first and second joints of the antennæ and the relative shortness of the third and fourth, which together are not much more than half the length of the second.

2. **Pseudocarnus magnus,** n. sp. (Tab. XXVIII. fig. 9.)

Ochraceous; eyes, lateral margins of pronotum, a narrow central linear fascia to clavus, a sublateral fascia to corium deflected a short distance from apex and transversely continued to inner apical angle, castaneous; antennæ ochraceous, basal joint and apex of second joint pale castaneous, third joint ochraceous, fourth fuscous; clavus and inner disk of corium much suffused with reddish; cuneus with the inner margin sanguineous; membrane pale brownish and semihyaline, cellular margins castaneous; sternum and legs ochraceous; abdomen reddish.

Long. 6 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Beside the large size of this species, other structural characteristics are found in the length of the first and second joints of the antennæ and the shortness of the third and fourth joints, which together are not more than a third of the length of the second joint. The transverse impression preceding the anterior collar of the pronotum is also very profound.

PARACARNUS, gen. nov.

Body elongate, convex, and shining. Head narrow, convex, and smooth. Eyes very large and long, but not exserted. Antennæ with the basal joint about as long as the head; second joint about half as long again as the first, with its apex incrassated; third and fourth together about equal in length to second. Pronotum coarsely punctate, narrowly elongate, with a distinct anterior collar preceded by a broad transverse impression; posterior margin truncate and about twice the width of anterior margin. Scutellum tumid, shining, and glabrous. Corium with the lateral margin slightly sinuate and convexly ampliated. Rostrum reaching the intermediate coxæ. Tibiæ indistinctly setose or practically non-setose.

1. **Paracarnus elongatus,** n. sp. (Tab. XXVIII. fig. 25.)

Head and pronotum pale ochraceous; eyes black; antennæ pale ochraceous, apex of the second joint fuscous; pronotum with a short roseate oblique fascia near lateral angles; scutellum luteous and levigate; clavus reddish ochraceous, with an inner dark fuscous fascia, which is broadest at apex of scutellum; corium pale hyaline, with the inner margin of embolium ochraceous, and with a large fuscous spot which extends from claval apex to and covering base of membrane, which is otherwise pale hyaline, with the cellular margins ochraceous; body beneath and legs ochraceous; posterior margins of meso- and metasternum, some abdominal markings (*imperfectly seen, owing to specimen being carded*), and a subapical annulation to intermediate and posterior femora pale sanguineous.

Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

NEOCARNUS, gen. nov.

Allied to *Paracarnus*, but with the first joint of the antennæ considerably longer than the head and a little shorter than the second joint. Head a little broader, and eyes more removed from the anterior margin of the pronotum. Lateral angles of the pronotum distinctly subnodulose. Scutellum tumid, shining, and glabrous, but more triangular and the lateral margins less convex than in *Paracarnus*. Legs much longer; tibiæ indistinctly setose or practically non-setose.

1. **Neocarnus vitreus.** (Tab. XXIX. fig. 1.)

Pale shining ochraceous; antennæ with the first and second joints ochraceous, the third and fourth creamy white; apices of the second, third, and fourth joints of the antennæ, basal and lateral margins of scutellum, claval suture, apical margin of corium, inner cellular margins to membrane, and apices of tarsi fuscous or black; eyes pale brownish; scutellum shining luteous; lateral angles of the pronotum subnodulose and brownish.

Long. 5 millim.

Hab. PANAMA, Bugaba (*Champion*).

ANIA, gen. nov.

Body elongate and subovate, somewhat shining, the hemelytra semitransparent, the pronotum coarsely punctate. Head smooth and shining, vertically deflexed in front of the eyes. Antennæ with the basal

joint much longer than the head, a little stouter and shorter than the second, which has its apical half moderately incrassated. Pronotum elongate, tumidly convex, but anteriorly depressed, with a distinctly raised anterior collar, preceded by a transverse constriction; the posterior margin truncate and more than twice the width of anterior, the lateral angles rounded. Scutellum with the central disk to apex moderately tumid. Corium distinctly ampliated and rounded at centre. Rostrum reaching anterior coxæ. Tibiæ non-setose.

This genus differs from the preceding (*Neocarnus*) by the broader and anteriorly less narrowed pronotum, the different structure of the scutellum, &c.

1. **Ania bimaculata,** n. sp. (Tab. XXVII. fig. 25.)

Shining pale ochraceous; head, first and second joints of antennæ, two transverse spots on the anterior constriction, and two rounded spots on the posterior disk of pronotum, basal angles of scutellum, base, apex, and margins of clavus, inner angle and a transverse streak to corium, inner margin and apex of cuneus, cellular margins to membrane, an anterior lateral spot to prosternum, meso- and metasternums, base and a series of marginal spots to abdomen, fuscous or black; base of the first joint of antennæ ochraceous; membrane fuliginous; legs pale ochraceous, the femora obscurely spotted with pale brownish.

Var. *a*. First and second joints of the antennæ ochraceous, the apex of the second joint black; corium with only faint indications of the transverse streak; body beneath with the dark marking paler or partly obliterated.

Long. 5 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

2. **Ania decoloris,** n. sp. (*Mala decoloris*, Tab. XXVI. fig. 23.)

Pale shining ochraceous; eyes, base and apex of second joint of antennæ, lateral angles of pronotum, scutellum, inner margins and apex of clavus, base of membrane, and inner margin of cuneus black; scutellum with a pale ochraceous spot on each lateral margin, and with the apex obscurely ochraceous; clavus pale brownish, the same hue appertaining to the interior angle of the corium; membrane pale hyaline; body beneath and legs pale ochraceous; femora obscurely spotted with pale brownish.

Long. 5 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Beside the colour differences, this species differs from the preceding by the more ovate body, the base of the pronotum being wider, and the lateral margins of the corium more convexly dilated. On the Plate the figure of this species has been erroneously ascribed to the genus *Mala*.

FUNDANIUS, gen. nov.

Body shining, faintly and obsoletely pilose. Head small, vertically deflexed and immersed in the pronotum to the eyes, where it is very broad. Antennæ with the basal joint about as long as the head; the second joint twice the length of the first, with its apical half gradually incrassated; third and fourth slender, third much longer than fourth, and together not quite so long as the second. Pronotum very coarsely punctate, with a wide anterior constriction, the width at lateral angles about three times that of anterior margin, angles posteriorly oblique to the basal margin, which is truncate. Scutellum tumid, constricted at base, and with its apical half deflexed. Corium very finely pilose. Tibiæ smooth, not setiform. Rostrum not quite reaching the intermediate coxæ.

1. **Fundanius rubricosus,** n. sp.

Ochraceous red or pale sanguineous; eyes, antennæ, apical half of cuneus, whole disk of body beneath, rostrum, and legs black; apical halves of the fore and intermediate tibiæ and apical third of the posterior tibiæ dull ochraceous; membrane smoky hyaline, the basal half dark fuscous; corium finely but distinctly pilose.

Long. 4½ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

2. **Fundanius maculatus,** n. sp. (Tab. XXVIII. fig. 10.)

Head and pronotum ochraceous; eyes, antennæ, and a large central spot to pronotum black; scutellum, corium, and cuneus black, corium with the base and a large spot at apex and inner half of cuneus ochraceous; membrane pale hyaline, with the basal half dark fuscous; body beneath ochraceous, with the whole disk blackish; legs black, apical halves of anterior and intermediate tibiæ and apical third of posterior tibiæ pale brownish. Corium and base of membrane finely but distinctly pilose.

Long. 4½ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

3. **Fundanius marginatus,** n. sp.

Black; inner margins of eyes, lateral margins of pronotum, head beneath and prosternum, apical halves of anterior and intermediate tibiæ, and apical third of posterior tibiæ ochraceous.

Long. 4½ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

4. **Fundanius pallescens,** n. sp. (Tab. XXVIII. fig. 11.)

Ochraceous; outer margin of first joint of antennæ, base and apical third of second joint, and the whole of third and fourth joints, eyes, and a basal central linear spot to scutellum fuscous or black; base of the pronotal constriction, claval margins, some irregular macular markings at basal margin of corium, and apex of cuneus brownish or pale castaneous; membrane smoky, or pale fuscous, with a lateral pale spot on each side and the cellular margins dark fuscous; body beneath (*carded specimen*) ochraceous, mottled and marked with brownish or pale castaneous; legs ochraceous.

Long. 5 millim.

Hab. GUATEMALA, Quiche Mountains (*Champion*).

5. **Fundanius albo-maculatus,** n. sp. (Tab. XXVIII. fig. 12.)

Head pale ochraceous, with two central black lines; antennæ fuscous, the base of first joint and a broad central annulation to second joint ochraceous; eyes fuscous; pronotum ochraceous, much shaded with fuscous, the margins narrowly pale and levigate; scutellum fuscous, basal angle and apex ochraceous; clavus fuscous, with a central linear ochraceous spot; corium fuscous, with a small subbasal and a large central pale ochraceous spot; cuneus dark fuscous; membrane pale fuscous, the cellular margins darker and with a large pale spot near apex of cuneus; body beneath ochraceous, shaded with fuscous; legs ochraceous, posterior femora with a broad central fuscous annulation.

Long. 4½ millim.

Hab. GUATEMALA, Panajachel (*Champion*).

NEOFURIUS, gen. nov.

Body broad, subovate, more or less pilose, but corium always distinctly and sometimes strongly pilose. Head short and broad, deflexed before the eyes, which are contiguous to the anterior margin of the pronotum. Antennæ with the basal joint about as long as the head, second joint about half as long again as the first; third and fourth together a little longer than second. Pronotum punctate, with an anterior collar preceded by a broad transverse constriction; posterior margin truncate, sometimes slightly concave (oblique at lateral angles), and more than twice or sometimes nearly three times the width of anterior margin. Scutellum moderately small and subtriangular, with the apex more or less acute. Corium broad, the lateral margins dilated and convex; fracture of cuneus profound. Rostrum about reaching the intermediate coxæ; legs always more or less pilose.

Mr. Champion found all the species of this genus by beating and sweeping low plants. I have here described sixteen species, and it is probably a most prolific Neotropical genus. It is found alike in the lowlands, and one species (*N. affinis*) at as high an altitude as 8000 feet.

1. **Neofurius villosus,** n. sp. (Tab. XXVIII. fig. 13.)

Reddish ochraceous; apex of head, eyes, and scutellum black; antennæ ochraceous, base and apex of first joint, second joint excluding base, and the fourth joint fuscous or black; membrane pale brownish, the basal half fuscous; body beneath (*carded specimen*) blackish; legs pale ochraceous.

The pronotum is somewhat coarsely punctate; the clavus thickly and finely punctate, and with the corium finely pilose.

Long. $4\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

2. **Neofurius variabilis,** n. sp.

Pale ochraceous; apical half of second joint of antennæ, eyes, a large cordate spot to pronotum, two basal angular spots to scutellum, clavus, and a broad central fascia to corium (not reaching lateral margins) black; the black markings to pronotum and corium more or less margined with pale sanguineous, especially the central fascia to corium, which is thus continued to lateral margin; body beneath and legs pale ochraceous, apices of posterior femora frequently pale sanguineous.

Var. *a*. An arcuated fascia to pronotum, clavus, and the whole of the transverse fascia to corium dull sanguineous.

Var. *b*. Resembling var. *a*, but the pronotum wholly pale ochraceous, without spot or fascia.

Var. *c*. Resembling typical forms of the species, but with the basal joint of the antennæ sanguineous, and with a transverse black line across centre of pronotum.

Var. *d*. Resembling var. *c*, but with the black markings of the pronotum and corium pale and dull reddish.

Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo, Cerro Zunil (*Champion*); PANAMA, Bugaba, David, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

In this variable species the black spots to the scutellum are (in the series now before me) always constant; and the same remark applies to the black apex of the second joint of the antennæ.

3. **Neofurius auratus,** n. sp. (Tab. XXVIII. fig. 14.)

Head, antennæ, pronotum, scutellum, and corium ochraceous; cuneus pale hyaline; second joint of antennæ, eyes, two discal spots to corium, inner claval margins, an oblique spot about centre of corium, and inner

and outer margins of clavus black; membrane smoky hyaline, with a pale fuscous spot at base; body beneath ochraceous; legs pale luteous; apices of posterior femora sanguineous, with a blackish streak above; tarsi somewhat infuscated; basal joint of antennæ more or less castaneous, apex of third and the fourth joints fuscous.

Long. 4 millim.

Hab. GUATEMALA, San Isidro (*Champion*).

4. **Neofurius amethystus,** n. sp. (Tab. XXVIII. fig. 15.)

Rosaceous; head, antennæ, sternum, and legs luteous; apex of head, lateral margins of sternum, abdomen, and apices of posterior femora rosaceous; cuneus very pale luteous, with the inner angle rosaceous; membrane pale semihyaline, narrowly fuscous at base; eyes and apex of second joint of antennæ black; scutellum with an elongate fuscous spot at each basal angle, and occupying half of each lateral margin.

Long. 3 millim.

Hab. PANAMA, Bugaba (*Champion*).

5. **Neofurius argentatus,** n. sp.

Creamy white; second, third, and fourth joints of antennæ, eyes, a spot on each side of clavus near apex of scutellum, a spot on each disk of corium near apex of clavus, basal angles and apex of cuneus, and cellular margins of membrane fuscous or black; legs pale ochraceous; tibiæ and apices of tarsi more or less fuscous or black.

Var. *a*. Differing from typical forms of the species by having the first joint of the antennæ (excluding base) and the inner apical margin of the cuneus only fuscous or black; tibiæ and the apices of the posterior femora brownish.

Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

6. **Neofurius scriptus.** (Tab. XXVIII. fig. 16.)

Creamy white; eyes, an outer streak to basal joint and the apex of second joint of antennæ, a central anterior spot to pronotum, scutellum, basal and apical spots to clavus, a transverse irregular curved fascia to corium, apex of cuneus, cellular margins of membrane, and a lateral spot to pro-, meso-, and metasternums (*abdomen indistinctly seen owing to specimen being carded*) black.

Long. 5 millim.

Hab. GUATEMALA, Pantaleon (*Champion*).

7. **Neofurius ornandus,** n. sp.

Creamy white; eyes, antennæ (excluding base of first joint), a spot near centre of each lateral margin of pronotum, scutellum, basal third of clavus, a large discal spot to corium near apex of clavus, sometimes connected to lateral margin by a narrow streak, apex of cuneus, cellular margins to membrane, tibiæ, a broad subapical annulation to posterior femora, apices of the tarsi, and some lateral sternal spots fuscous or black.

Long. 4 millim.

Hab. GUATEMALA, La Tinta (*Champion*); PANAMA, Tolé (*Champion*).

8. **Neofurius pictus,** n. sp. (Tab. XXIII. fig. 24, var. *Furius pictus*.)

Creamy white; eyes, apex of second joint of antennæ, scutellum, an oblique spot at basal inner margin of

clavus, apex of clavus, an irregular transverse fascia to corium, and a lateral spot to mesosternum black; body beneath and legs pale ochraceous; membrane pale hyaline, the cellular margins fuscous.
Var. *a*. Apex of the clavus concolorous, not black; mesosternum without the lateral black spot.
Long. 5 millim.

Hab. MEXICO (*Mus. Berol.*); GUATEMALA, San Gerónimo (*Champion*).

A Mexican varietal specimen is here figured.

9. **Neofurius affinis,** n. sp.

Creamy white; first and second joints of the antennæ, basal margin of head, lateral angles and a spot at the anterior angles of pronotum, scutellum, base of clavus, a broad longitudinal fascia from apex of scutellum to claval apex, an irregular central transverse fascia to corium, inner margin of cuneus, apices of femora and bases of tibiæ, and some lateral sternal markings (*carded specimen*) black; base of the first joint of antennæ creamy white; membrane pale hyaline, the cellular margins pale brownish.
Long. $4\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 8000 feet (*Champion*).

10. **Neofurius decoratus,** n. sp. (Tab. XXVIII. fig. 17.)

Pale stramineous; eyes, apex of second joint of antennæ, a narrow transverse central fascia to pronotum, basal angles of scutellum, clavus (excluding outer basal angle), an irregular central transverse fascia to corium, which is widest at costal margin, and is continued along claval margin to inner angle, and basal angle of membrane black; apices of posterior femora sanguineous.
Costal margin of corium ampliated and possessing a distinct pouch-like depression about centre.
Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

11. **Neofurius infumatus,** n. sp. (Tab. XXVIII. fig. 18.)

Pale stramineous with a greenish tinge; eyes, apex of second joint of antennæ, a large and broad sublunate basal spot to pronotum, basal angles of scutellum, clavus, an irregular but broad central fascia to corium not reaching the costal margin, and inwardly extending to inner angle, and basal angle of membrane black.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Pantaleon (*Champion*).

12. **Neofurius denigratus,** n. sp.

Obscure ochraceous; eyes, apex of first, and the whole of the second, third, and fourth joints of antennæ, a narrow central longitudinal fascia to and a spot at the lateral angles of pronotum, scutellum, clavus, an irregular central fascia to corium, not quite reaching costal margin, and broadest at inner angle, inner and outer margins of cuneus, basal angle and cellular margins to membrane, lateral spots to sternum and abdomen, and sometimes sternal and abdominal sutures, and apices of the tarsi fuscous or black.
Var. *a*. Scutellum black, with the margins and apex ochraceous; clavus ochraceous, with the margins black.
Long. 5 millim.

Hab. GUATEMALA, San Isidro, Cerro Zunil (*Champion*).

13. **Neofurius hieroglyphicus,** n. sp. (Tab. XXVIII. fig. 19.)

Obscure ochraceous; basal spot to apex of head, basal joint of antennæ (remainder mutilated), a central longitudinal macular fascia passing through the anterior collar and constriction of pronotum, scutellum

(excepting basal angular spots and lateral margins and apex), margins of clavus, a reticulated transverse fascia to corium, a transverse streak at base of cuneus, cellular margins to membrane, sternal and abdominal sutures (*carded specimen*) black; anterior and intermediate legs ochraceous (posterior legs mutilated).

Long. $5\frac{1}{2}$ millim.

Hab. GUATEMALA, Sinanja (*Champion*).

14. **Neofurius pallidulus,** n. sp. (Tab. XXVIII. fig. 20.)

Creamy white; eyes, apex of second joint, apical half of third joint and the fourth joint of antennæ, inner margins of clavus, and an oblique spot near centre of costal margin of corium, black; costal margin of corium from near base to centre, and posterior femora dark sanguineous; lateral margins of cuneus narrowly fuscous; body beneath indistinctly seen (*carded specimen*).

Costal margin of corium ampliated and possessing a distinct pouch-like depression about centre.

Long. 4 millim.

Hab. GUATEMALA, Panajachel (*Champion*).

15. **Neofurius plagosus,** n. sp. (Tab. XXVIII. fig. 21.)

Creamy white, tinged with very pale ochraceous; eyes, first and second joints of antennæ, a rounded spot at base, and an elongate spot about centre of clavus, an oblique fascia about centre of corium, inner margin of cuneus, cellular margins to membrane, two lateral spots to sternum, apices of femora, and the tibiæ fuscous or black; base of first joint of antennæ and apex of posterior tibiæ creamy white, tinged with pale ochraceous.

Long. 6 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

16. **Neofurius linearis,** n. sp. (Tab. XXVIII. fig. 22.)

Head, pronotum, and legs ochraceous; scutellum, corium, and membrane creamy white; eyes, first and second joints of antennæ, a longitudinal fascia crossing clavus and continued along corium to inner angle of cuneus, outer and inner margins of cuneus, costal margin of corium, cellular margins to membrane, apices of femora, the tibiæ, and apices of tarsi fuscous or black; base of first joint of antennæ pale ochraceous; body beneath pale ochraceous or with the abdomen sometimes creamy white.

Long. 5 millim.

Hab. GUATEMALA, San Gerónimo, Mirandilla (*Champion*).

BIBACULUS, gen. nov.

Allied to *Neofurius*, but with the body elongate and very indistinctly pilose, the lateral margins of the corium parallel, not dilated. Antennæ with the first joint about as long as or a little shorter than the head, second joint almost twice as long as the first, third joint distinctly longer than second. Pronotum as in preceding species, but longer, posterior margin concavely truncate, and about twice the width of anterior margin. Other characters as in *Neofurius*.

This genus has apparently considerable superficial resemblance to *Hyaliodes*, Reut., founded for the reception of *Capsus vitripennis*, Say, a species I only know by the figure given by Townend Glover (Ill. Ins. Hem. t. vii. f. 8). Reuter's genus is, however, rendered very distinct by the great length of the basal joint of the antennæ.

1. **Bibaculus modestus,** n. sp. (Tab. XXVIII. figg. 23, 24.)

Creamy white; eyes, apex of first joint and the second, third, and fourth joints of antennæ, an irregular arcuated fascia to pronotum, two basal spots to scutellum, inner margins and apical half of clavus, an irregular macular transverse fascia to corium, lateral margins of cuneus, cellular margins of membrane, apices of femora, inner sides of tibiæ, and apices of tarsi fuscous or black; second joint of antennæ with a pale central annulation.

Var. *a*. Differing by having all the black markings brownish and more or less obliterated.

Long. 4 millim.

Hab. GUATEMALA, Senahu, Las Mercedes (*Champion*).

MALA, gen. nov.

Body elongate, the corium convexly ampliated. Head broad, smooth and shining, deflected a little in front of the eyes, which are contiguous to the angles of the pronotal collar. Pronotum strongly constricted and narrowed beyond middle, the basal half convexly gibbous and thickly punctate, the lateral margins convex to the anterior constriction, the posterior margin truncate and about twice as broad as anterior margin. Antennæ long, slender, the first joint stoutest and longer than the head, second about half as long again as the first, third a little shorter than second and subequal in length with fourth. Scutellum somewhat tumid, with a basal depression. Corium very finely and obscurely punctate. Posterior tibiæ finely and obscurely setose. Rostrum not quite reaching the intermediate coxæ.

1. **Mala unicolor,** n. sp. (Tab. XXVI. fig. 21.)

Very pale ochraceous; eyes black; outer margin of first joint and the third and fourth joints of antennæ and apices of the tarsi fuscous; the scutellum and abdomen are slightly darker or more ochraceous in hue; membrane pale hyaline, the cellular margins pale brownish; inner and outer margins of the cuneus pale brownish.

Long. 6 millim.

Hab. GUATEMALA, San Isidro (*Champion*).

2. **Mala ornata,** n. sp. (Tab. XXVI. fig. 22.)

Head, pronotum, scutellum, antennæ, body beneath, and legs very pale ochraceous; corium pale creamy, talc-like and shining; eyes, apex of the second joint of antennæ, a subquadrate spot on each side of clavus near base, claval suture (excluding base and apex), and an oblique transverse fascia to corium black; membrane pale hyaline, the cellular margins pale fuscous; outer margin of cuneus pale fuscous.

Var. *a*. Differing from typical specimen by having the eyes ochraceous.

Var. *b*. Eyes black, but the claval suture entirely ochraceous.

Long. 6 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Three specimens captured by Mr. Champion represent the three forms above described, and our only knowledge of the species, which may therefore be considered as of a very variable character.

SILIA, gen. nov.

Body elongate, oblong, somewhat shining and sparingly pilose. Head broad at base and vertically deflexed, the eyes contiguous to the pronotal collar. Antennæ pilose; basal joint moderately incrassated, as long as the head; second joint almost twice the length of the first, its apex scarcely thickened, third and fourth very slender. Pronotum elongate, with a wide and convexly tumid anterior collar, preceded by a transverse constriction, the discal portion to base convexly tumid and coarsely punctate, the lateral angles

subacutely rounded, the base truncate and about twice the breadth of anterior margin. Scutellum tumid, with the base excavated. Corium with the margins almost parallel and strongly pilose. Legs finely but thickly setiform. Rostrum reaching the intermediate coxæ.

1. *Neosilia viduata, n. sp. (Tab. XXVII. fig. 21, *Silia viduata.*)

Very pale ochraceous; eyes, antennæ, two large transverse basal spots to pronotum, scutellum, clavus, interior area of corium, inner basal angle and apex of cuneus, and apices of the tarsi, fuscous or black; bases of the first and third joints of antennæ and apex of the scutellum pale ochraceous; membrane pale fuscous, the cellular margins darker and the apex paler; body beneath pale ochraceous, a spot at basal lateral angles of prosternum black, margins and apex of abdomen fuscous.

Long. 5 millim.

Hab. PANAMA, Bugaba (*Champion*).

2. Neosilia sororia, n. sp. (Tab. XXIX. fig. 2.)

Head castaneous; eyes black; antennæ black, the base of the first joint ochraceous; pronotum black, the anterior constriction ochraceous; scutellum black; clavus black, with a central ochraceous spot on each side; corium very pale ochraceous, with a black spot near inner angle; inner margin and apex of cuneus fuscous; membrane pale ochraceous, the cellular margins black, the cellular areas fuscous, and the base blackish; head beneath ochraceous; sternum black, with the anterior margin ochraceous; abdomen pale greenish ochraceous, with a lateral segmental row of small fuscous spots; legs pale ochraceous, apices of the femora, tibiæ, and tarsi fuscous.

Long. 4 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

3. Neosilia cineracea, n. sp. (Tab. XXVII. fig. 22, *Silia cineracea.*)

Cinereous; eyes and antennæ black, the basal joint of the latter cinereous; a central longitudinal streak to clavus, a central spot to pronotum, lateral margins of the corium excluding base, outer and inner margins of cuneus (the last not reaching base), cellular margins to membrane, and apices of the tarsi fuscous.

Var. *a.* The fuscous markings to clavus and corium obsolete or only faintly visible.

Long. 5 to 5½ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

CHIUS, gen. nov.

Allied to *Neosilia*, but differing by the longer head, the eyes not contiguous but some distance from the pronotal collar. First joint of the antennæ as long as the head, second joint about twice the length of the first. Pronotum levigate, with the anterior collar narrower than in *Neosilia*, the posterior margin concave. Scutellum large, strongly deflected from base to apex. Corium with the margins almost parallel but not pilose. Rostrum almost reaching the posterior coxæ.

1. Chius maculatus, n. sp. (Tab. XXVII. fig. 23.)

Very pale ochraceous; eyes, apices of the first, second, and third joints of antennæ, two basal spots to pronotum, apex of scutellum, apex of clavus, a spot near each apex of corium, and a spot on each lateral margin of membrane fuscous or black.

Long. 4 millim.

Hab. GUATEMALA, near the city (*Champion*).

* Since publishing the name "*Silia*" on the preceding page, I have found that it is preoccupied (May, Moll. 1876); it is therefore better to at once change it to prevent future correction. For the same reason and with the same object I now substitute *Zacynthus* for *Zacorus* (p. 240), *Zoilus* for *Zopyrus* (p. 249), *Carmelus* for *Carnus* (p. 287), and *Annona* for *Ania* (p. 289).

PARACHIUS, gen. nov.

Allied to *Chius*, but with the antennæ much longer and the basal joint considerably longer than the head. Legs much longer, the posterior tibiæ being especially developed.

1. **Parachius luteolus,** n. sp. (Tab. XXVII. fig. 24.)

Pale ochraceous; eyes, outer margin of basal joint, the apex of second joint, and the third and fourth joints of antennæ, and the bases and apices of tarsi fuscous or black; sutural margins of clavus, inner margins of corium, and cuneus greenish; membrane pale ochraceous and subhyaline.

Long. 5 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

FALCONIA, gen. nov.

Body elongate, subdepressed, finely but obscurely and sparingly pilose. Head with about the basal half somewhat tumid and slightly channelled on the inner side of the eyes, remaining portion vertically deflexed. Eyes large, prominent, slightly directed backwards, and situate contiguous to anterior margin of pronotum. Antennæ with the basal joint slightly incrassate and longer than the head; second joint much more slender, finely pilose, about half as long again as first, and slightly thickened at apex; third and fourth slender, third much longer than fourth. Pronotum elongate, somewhat coarsely punctate, the posterior margin, which is strongly and concavely sinuate before the scutellum, more than twice as broad as the anterior, with a strong transverse constriction near anterior margin, between which it is prominently tumid; lateral angles obtusely rounded or subnodulate. Scutellum transversely and profoundly excavated at base. Corium with the disc punctate, the costal margin convexly ampliated towards apex. Rostrum reaching the intermediate coxæ.

1. **Falconia poetica,** n. sp. (Tab. XXIX. fig. 3.)

Creamy ochraceous; eyes, anterior margin of pronotum, and scutellum black; antennæ black, the basal joint ochraceous, outwardly streaked with black; a fuscous spot at base of membrane extending over the apical margins of the corium; inner margin and apex of cuneus fuscous. Body beneath ochraceous; the meso- and metasternums, the anterior margin of the prosternum, and three large spots on basal half of lateral margins of abdomen, black*; coxæ and legs ochraceous, the tarsi and apical halves of the posterior femora fuscous.

Long. 4 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

2. **Falconia caduca,** n. sp. (Tab. XXIX. fig. 4.)

Creamy ochraceous; eyes, anterior margin of pronotum, and the scutellum black; corium with a large oblong fuscous spot at each inner angle; head with the apex and a transverse central linear spot fuscous; antennæ with the first and second joints ochraceous, outwardly streaked with fuscous (remaining joints mutilated). Body beneath pale ochraceous, lateral margins of the sternum blackish (*carded specimen*); legs pale creamy ochraceous, apices of the tarsi and an upper streak on the apical halves of posterior femora fuscous.

Long. 4 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

ANTIAS, gen. nov.

Body elongate subovate, subdepressed, the lateral margins of the corium ampliated. Head moderately tumid; eyes large and contiguous to the anterior margin of the pronotal collar. Antennæ with the basal joint not prominently incrassated, but little longer than the head, second joint more than twice the length of first, third and fourth slender, almost subequal in length. Pronotum broad, very coarsely

* The markings underneath imperfectly seen owing to the specimen being carded.

punctate, with a distinct anterior collar, the posterior margin about twice the breadth of anterior, the lateral angles more or less nodulose. Scutellum moderately tumid. Corium semihyaline, the lateral margins distinctly and convexly ampliated. Rostrum reaching the intermediate coxæ.

1. **Antias subæratus,** n. sp. (Tab. XXIX. fig. 5.)

Pale ochraceous; eyes black; apex of the head and apical joint of antennæ fuscous; antennæ with the apex of the second joint, third joint excluding base, a broad subclaval fascia on each side of corium meeting posteriorly and extending to base of membrane, apical margin of corium, and apex of posterior femora pale reddish; cuneus and membrane pale hyaline; pronotum with a narrow curved blackish fascia at anterior margin; body beneath (*imperfectly seen owing to carded specimen*) with the anterior margin of prosternum and some central longitudinal markings blackish.

Note. The pale reddish markings above are inconstant in size and arrangement.

Long. 4 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

2. **Antias aheneus,** n. sp. (Tab. XXIX. fig. 6.)

Pale ochraceous; eyes, apex of second joint of antennæ, and two transverse spots near anterior angles of pronotum dark fuscous; clavus and a spot at inner angle of corium pale fuscous; first and second joints of antennæ, a lateral submarginal streak to corium, and apices of posterior femora more or less reddish; apical joint of antennæ pale stramineous; body beneath (*carded specimen, and imperfectly examined*) pale reddish, anterior margin of prosternum, a large central spot to mesosternum, a large lateral spot on each side of metasternum, and apex of abdomen blackish.

Long. 4 millim.

Hab. PANAMA, David (*Champion*).

FUSCUS, gen. nov.

Body elongate subovate, moderately robust and pilose, the lateral margins of the corium moderately convexly ampliated. Head moderately tumid; eyes large and prominent. Antennæ with the first joint shorter than the head and moderately incrassated; second joint about three times the length of the first, and with its apical half strongly incrassated; third and fourth short, slender, and subequal in length. Pronotum coarsely punctate, moderately convexly tumid, the posterior margin about twice the width of anterior, the lateral angles subnodulose. Scutellum triangular, somewhat tumid, the apex depressed. Corium with the lateral margins distinctly and laminately ampliated; cuneal fracture not profound. Membrane considerably passing the apex of abdomen. (*Length of rostrum undetermined, owing to specimen being carded.*)

1. **Fuscus crinitus,** n. sp. (Tab. XXIX. fig. 7.)

Ochraceous, finely pilose; head with the apex, eyes, apical half of the second joint of antennæ, and fourth joint (excluding base) fuscous or black; pronotum with four longitudinal castaneous fasciæ, the two central broadest and not reaching anterior or posterior margins; scutellum with two central longitudinal fasciæ, and the lateral margins between these fasciæ and base very dark castaneous; clavus with two central, short, dark castaneous fasciæ, divided by the suture, and parallel with the two central fasciæ of scutellum; corium with some irregular and somewhat reticulated discal castaneous fasciæ; cuneus with two longitudinal castaneous fasciæ, one central and one lateral; membrane with the base and apical margin broadly fuscous. Legs ochraceous, apices of the tibiæ blackish; apices of the femora and bases of the tibiæ infuscated. (*Body beneath unexamined owing to the specimen being carded.*)

Long. 4 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

NEOLEUCON, gen. nov.

Elongate subovate. Head very short and broad, vertically deflected before the eyes, which are moderately stylated and directed upwards, basal margin concave; antennæ with the basal joint somewhat incrassated

and much longer than the head, second joint not quite twice as long as the first, third a little more than half the length of second, and subequal to or a little shorter than fourth. Pronotum punctate, with a wide nodulose constriction on anterior half followed by a wide anterior collar, lateral angles nodulose, posterior margin about twice the width of anterior. Scutellum triangular, foveate at base. Corium with the lateral margins moderately ampliated; cuneal fracture and base indistinct. Membrane considerably passing apex of abdomen. Rostrum reaching posterior coxæ.

1. **Neoleucon horribilis**, n. sp. (Tab. XXVI. fig. 24.)

Head, pronotum, and corium ochraceous; apex of head, two large transverse spots near lateral angles of pronotum, scutellum, a large subcordate spot at claval suture, lateral margins, and a large transverse spot at apex of corium black; cuneus pale hyaline, with the inner and outer margins black; membrane pale hyaline, the cellular margins black; antennæ with the first and second joints black, third and fourth fuscous, bases of the first and third pale luteous; eyes fuscous. Body beneath ochraceous (*carded specimen*); meso- and metasternums, a large lateral spot to prosternum, and base of abdomen fuscous or black. Legs black, basal halves of femora pale luteous; extreme apices of femora, apices of tibiæ, and the tarsi more or less ochraceous.

Long. 6 millim.

Hab. PANAMA, Bugaba (*Champion*).

SPARTACUS, gen. nov.

Body elongate subovate. Head short and broad, abruptly deflected in front of the eyes, which are stylated and slightly directed upwards. Antennæ with the basal joint much longer than the head, second a little longer than the first, third almost subequal in length to second and a little longer than fourth. Pronotum punctate, long, strongly constricted about the middle, the basal half convexly gibbous, the lateral angles subnodulose, with a well-developed anterior collar, the basal margin about twice the width of anterior margin. Scutellum somewhat small, triangular, the basal margin transversely sulcate at centre. Corium and membrane pale hyaline, the lateral margins of the first moderately and convexly ampliated. Cuneus long, slender, and curved, extending to apex of membrane. Rostrum just passing the anterior coxæ.

1. **Spartacus albatus**, n. sp. (Tab. XXVI. fig. 25.)

Head, pronotum, and scutellum pale creamy ochraceous; eyes and antennæ dark fuscous, the base of the first joint pale creamy ochraceous; corium and membrane pale hyaline and talc-like; outer and apical margins of cuneus and cellular margins of membrane fuscous. Body beneath (*carded specimen*) and legs pale creamy ochraceous; apices of the tarsi fuscous.

Long. 5 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

TRYGO, gen. nov.

Body elongate subovate, lateral margins of the corium ampliated. Head large, gibbous, deflected in front of the eyes; eyes large, prominent, not stylated. Antennæ with the basal joint a little shorter than the head, second joint a little more than twice the length of the first, third and fourth short and slender. Pronotum punctate, with a wide, anterior, tumid constriction, followed by a wide anterior collar, the basal portion moderately convex, the lateral angles faintly subnodulose, the posterior margin more than twice the width of anterior margin. Scutellum triangular, moderately tumid. Corium with the lateral margins convexly ampliated, the ampliated portion pale hyaline, its inner margin concave; cuneus moderately long and subtriangular. Rostrum not reaching the intermediate coxæ.

1. **Trygo imitationis**, n. sp. (Tab. XXIX. fig. 8.)

Bright and deep shining stramineous; head, eyes, anterior constriction to and lateral angles (very broadly) of pronotum, basal margin and angles of scutellum, base of corium, inner and sutural margins of clavus,

lateral margins of corium (very narrowly) preceding the ampliated and hyaline extension, apex of corium (widest at inner angle), lateral margins of membrane, and body beneath black; pronotal collar castaneous; antennæ with the basal joint pale stramineous, the second joint black with its base stramineous, third and fourth joints fuscous; coxæ and legs ochraceous (*carded specimen*); membrane pale smoky hyaline.

Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

JORNANDES, gen. nov.

Body above broadly subovate, depressed, glabrous, shining. Head very broad at base and vertically deflexed. Antennæ inserted at some distance before the eyes, with the basal joint incrassated and much shorter than the head; second joint about three times the length of the first, its apex slightly incrassated; third and fourth joints more slender than second, the third twice the length of fourth. Pronotum broad, the lateral angles subacutely rounded, the posterior margin slightly concave at centre, width at lateral angles about twice that of anterior margin. Scutellum faintly transversely striate, its disc convexly tumid. Corium widening posteriorly to cuneus, the fracture deep. Apices of posterior femora and the posterior tibiæ with a few scattered setæ. Rostrum (apparently *) not reaching the intermediate coxæ.

1. **Jornandes championi**, n. sp. (Tab. XXIX. fig. 9.)

Head ochraceous, the apex, eyes, and a central spot at base black; antennæ with the first and second joints ochraceous, the base of the first and base and apex of the second black, third and fourth joints black; pronotum black, the anterior and lateral margins and angles broadly ochraceous, the basal margin narrowly and obscurely ochraceous; scutellum and corium black, base of clavus and corium, apex of clavus, and a spot preceding cuneus ochraceous; cuneus fuscous; membrane fuscous, black at base. Body beneath (*carded specimen*) black, lateral margins of sternum and legs ochraceous, tarsi blackish.

Long. 3 millim.

Hab. GUATEMALA, La Mercedes (*Champion*).

FLORUS, gen. nov.

Body broadly subovate, lateral margins of corium convexly ampliated. Head broad, deflexed in front of eyes, which are contiguous to anterior margin of pronotum. Antennæ with the first joint simple and a little longer than head; second joint twice the length of first, and gradually incrassated; third and fourth joints slender and subequal in length. Pronotum punctate, convex, anteriorly deflected, with a narrow anterior collar, the lateral angles rounded and subnodulose, the anterior angles broadly rounded. Scutellum triangular, tumid at base. Corium with the ampliated margins subhyaline; cuneus broadly triangular, fracture not profound; membrane considerably passing apex of abdomen. (*Rostrum imperfectly seen, owing to specimen being carded* †.)

1. **Florus insolitus**, n. sp. (Tab. XXIX. fig. 10.)

Head and pronotum black, anterior collar and basal margin of pronotum ochraceous; antennæ with the first and third joints pale luteous, second joint black, fourth joint fuscous; scutellum black; clavus black,

---

* Judging from a difficult examination of a carded specimen.

† The great majority of the new species here described are only represented by single specimens, and as these are carded, they are, though in beautiful condition, somewhat unfit for the careful examination of several characters important to the description of new genera and species. Soft-bodied insects like the Capsidæ do not admit with safety of the operation of floating from the cards to which they are affixed, and I have therefore been compelled to give the best description possible, which with the figures will, I think, simplify the process of identification.

with a central ochraceous spot on each side; corium ochraceous, with a basal spot and a central transverse fascia, which at middle is continued posteriorly to base of membrane, black; cuneus pale ochraceous; membrane pale fuscous, with a large apical ochraceous spot; head and sternum beneath black, anterior margin of prosternum ochraceous; abdomen and legs ochraceous, the abdomen with some black basal spots (*carded specimen*).

Long. 4 millim.

Hab. PANAMA, David (*Champion*).

PIRITHOUS, gen. nov.

Body subovate, more or less gibbous, opaque, and pilose. Head somewhat tumid, anteriorly and vertically deflexed before the eyes, which are large and contiguous to the anterior margin of the pronotum. Antennæ with the first joint constricted at base and longer than head; second joint a little longer than the first; fourth a little longer than third. Pronotum punctate, tumidly convex at base and then deflected to head, with an obscure transverse anterior constriction, the basal margin convex, and not quite twice the width of anterior margin, the lateral margin oblique to the anterior constriction. Scutellum subtriangular, with a central longitudinal nodulose carination. Corium with the lateral margin widened towards cuneus, which is almost as broad at base as long, with the fracture profound. Membrane considerably passing the apex of the abdomen. Rostrum about reaching the intermediate coxæ.

This genus is apparently allied to *Dacota*, Uhler, from which the structure of the antennæ will at once separate it.

1. **Pirithous pallipes,** n. sp. (Tab. XXIX. fig. 11.)

Black, opaque, more or less covered with greyish pile; antennæ pale stramineous, the third and fourth joints infuscated; corium with a more or less distinct castaneous tinge; cuneus black; membrane pale hyaline, the cellular areas dark fuscous; body beneath black, covered with greyish pile; legs pale stramineous, the apices of the tarsi fuscous.

Long. 3½ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

The three following genera I prefer at present to leave divisionally unattached. The two first, *Eurotas* and *Lampethusa*, seem to appertain to Reuter's division Plagiognatharia; but the third, *Demarata*, is distinct from any division which, so for as I know, has been proposed, and this distinctness is in the aberrant character of the antennæ, which, taken alone, would even almost prevent it being classified in the family Capsidæ.

EUROTAS, gen. nov.

Body somewhat elongately subovate, moderately deflexed, and shining. Head deflexed, compressed, and tapering before the eyes. Antennæ inserted in front of the eyes, with the first joint a little longer than the head, very thickly incrassated and subnodulose; second joint about half as long again as the first, its basal half slender, the apical half nodulosely incrassated; third joint a little more than half the length of second, and moderately incrassated; fourth joint about half the length of second, and robust. Pronotum somewhat triangular, the base moderately convexly tumid, the anterior margin with a very slender anterior collar, the basal margin about twice the width of anterior margin. Scutellum triangular, detached from pronotum, its apex acutely produced and with a transverse basal sulcation. Pronotum with the lateral margins not dilated, the cuneus elongately triangular. Rostrum about reaching the intermediate coxæ.

1. **Eurotas nodosus,** n. sp. (Tab. XXIX. fig. 12.)

Black, shining; eyes dull greyish; membrane pale fuscous. Structural characters as described in generic diagnosis.

Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

LAMPETHUSA, gen. nov.

Subovate, more or less opaque. Head moderately compressed, and tapering before the eyes. Antennæ inserted in front of the inner margin of the eyes; first joint not quite twice the length of the head, very widely compressed and dilated; second joint slender, incrassated towards the apex, and subequal in length to first; third and fourth joints slender, third longer than fourth. Pronotum with a distinct anterior collar, the posterior margin convex, and twice as broad as the anterior margin, beyond basal half strongly deflected towards head. Scutellum moderately large and tumid, triangular, and with a faint central longitudinal carination. Corium widening towards apex; cuneus subtriangular, with the fracture distinct. Membrane considerably longer than the abdomen. Rostrum about reaching the intermediate coxæ.

1. **Lampethusa anatina,** n. sp. (Tab. XXIX. fig. 13.)

Ochraceous, mottled and marked with very dark castaneous. Head ochraceous, the eyes fuscous; antennæ with the basal joint castaneous, its margins pilose, second joint fuscous, annulated with luteous near base, third joint ochraceous, darker towards apex, fourth joint dark ochraceous; pronotum ochraceous, with the lateral angles and two large and almost confluent spots on each basal side dark castaneous; scutellum pale castaneous, with three small basal dark castaneous spots, and with the margins and central carination paler; corium aud clavus ochraceous, largely and irregularly spotted with dark castaneous; cuneus pale castaneous, the basal angles and apex dark castaneous; membrane pale fuscous, spotted and marked with greyish. Body beneath imperfectly seen (*carded specimen*); legs castaneous, tibiæ annulated with ochraceous.

Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

DEMARATA, gen. nov.

Body subovate, moderately convex, pilose, and punctate above. Head broad, compressed in front of eyes. Antennæ inserted nearer to each other than to eyes; first joint moderately incrassated, shorter than head; second joint rather more than twice the length of first, and slightly incrassated at apex; third and fourth joints as stout as second, third about half as long as second, and longer than third. Pronotum deflected from about the basal third towards head, with the lateral angles not prominent, but subacute, posterior margin about twice the width of anterior margin, which is not provided with a collar. Scutellum triangular. Corium widening towards cuneus, which is subtriangular, the fracture not profound. Membrane considerably longer than the abdomen. Rostrum reaching the intermediate coxæ.

1. **Demarata villosa,** n. sp. (Tab. XXIX. fig. 14.)

Head, pronotum, and scutellum black, the pronotum with the base and lateral angles dark castaneous; antennæ with the first and second joints ochraceous, the third and fourth fuscous; corium and cuneus dull castaneous; membrane pale fuscous, the cellular areas *sometimes* darker. Body beneath (*carded specimen*) fuscous; coxæ and legs ochraceous, apices of the tarsi fuscous. The body above is covered with greyish pile, which is less abundant on the head and pronotum.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city (*Champion*).

SUPPLEMENT.

SINCE the commencement [in 1880] of the present volume, which is devoted to the families Pentatomidæ, Coreidæ, Lygæidæ, Pyrrhocoridæ, and Capsidæ, a large number of additional specimens, including many new species, have reached the hands of the Editors from several sources, but principally from Mr. Champion, embracing the results of his collections made in the State of Panama. It is now proposed, in order to include the supplementary species of these families in this volume, to enumerate and describe this fresh material, making such corrections as are necessary in relation to what has been already published, and to include the additional localities for the previously recorded species.

Subfam. *CYDNINÆ* (p. 1).

Since writing on the *Cydninæ* Dr. Signoret has published an exhaustive treatise on the group, and although I submitted most of our specimens to him at the time of preparing this portion for the press, his further studies have led to greater precision, so that some corrections require to be made. His loans from the different continental museums have resulted in the discovery of many new species, which can now be added to our fauna.

CYRTOMENUS (p. 2).

Cyrtomenus teter (p. 2).

Cyrtomenus excavatus (p. 3).

Cyrtomenus teter, Sign. Ann. Soc. Ent. Fr. ser. 6, i. p. 197, t. 6 (Cydnides, t. 3) fig. 17.

To the localities given, add:—GUATEMALA, Purula (*Champion*).

The examination of a long series of specimens being now possible, it appears that the male sex is uniformly of the form described by myself as *C. excavatus* and the female of the form figured as *C. teter*. Dr. Signoret has therefore arrived at the opinion, with which I heartily agree, that the two are but the sexes of one species, and that the name *C. excavatus* naturally sinks as a synonym of *C. teter*.

Cyrtomenus mirabilis (p. 3).

To the localities given, add:—PANAMA, Bugaba (*Champion*).

ONALIPS (p. 4; to follow the genus *Syllobus*).

Onalips, Signoret, Ann. Soc. Ent. Fr. ser. 6, i. p. 323, t. 10 (Cydnides, t. 6) figg. 43, 44 (1881).

This genus is thus differentiated by the author from *Syllobus*:—"Lobes latéraux sans dilatation mais arrondis."

Onalips contains, at present, only two described species, one of which inhabits Colombia, including the State of Panama, and the other Western Tropical Africa.

1. Onalips nigerrimus.

Æthus nigerrimus, Dall. List Hem. i. p. 112. 1[1].

Onalips nigerrimus, Sign. Ann. Soc. Ent. Fr. sér. 6, i. p. 323, t. 10 (Cydnides, t. 6) f. 43[2].

Hab. PANAMA[2], Volcan de Chiriqui, San Lorenzo, Taboga Island (*Champion*).—COLOMBIA[1], Medellin[2].

SYLLOBUS (p. 3).

Syllobus emarginatus (p. 4).

To the locality given add:—MEXICO, Presidio (*Forrer*).

One example of this rare species is now in our collection. This is remarkable for its small size (long. 8 millim.), but otherwise is not to be differentiated, at least by myself, from typical specimens.

HOMALOPORUS.

Homaloporus, Uhler, Bull. U. S. Geol. & Geogr. Surv. iii. p. 377 (1877); Sign. Ann. Soc. Ent. Fr. sér. 6, i. p. 330.

This genus is both Nearctic and Neotropical in its distribution, and Signoret has enumerated three species.

1. Homaloporus pangæiformis.

Homaloporus pangæiformis, Sign. Ann. Soc. Ent. Fr. sér. 6, i. p. 331, t. 11 (Cydnides, t. 7) f. 48[1].

Hab. MEXICO[1].

ÆTHUS (p. 4).

This genus, as since defined and described by Signoret, "qui est assez difficile à définir" (*cf.* Ann. Soc. Ent. Fr. sér. 6, i. p. 423), embraces a large number of species (thirty-four), and is represented in both the Eastern and Western hemispheres. Signoret has also included in the genus *Æthus* two species which I had otherwise generically treated: *Pangæus impuncticollis* (p. 7) and *Microporus testudinatus* (p. 8).

2. Æthus rogenhoferi.

Æthus hogenhoferi (sic), Sign. Ann. Soc. Ent. Fr. sér. 6, i. p. 429, t. 12 (Cydnides, t. 8) f. 58[1].

Hab. MEXICO[1]; GUATEMALA[1].

3. Æthus politus.

Æthus politus, Sign. Ann. Soc. Ent. Fr. sér. 6, ii. p. 36, t. 2 (Cydnides, t. 10) f. 77[1].

Hab. NORTH AMERICA, California[1].—NICARAGUA[1].

4. Æthus ferrugineus.

Æthus ferrugineus, Sign. Ann. Soc. Ent. Fr. sér. 6, ii. p. 40, t. 2 (Cydnides, t. 10) f. 82 [1].

Hab. Mexico [1].

PANGÆUS (p. 5).

1. Pangæus margo (p. 5).

Pangœus confusus, Sign. Ann. Soc. Ent. Fr. sér. 6, ii. p. 249, t. 5 (Cydnides, t. 13) f. 15.

To the localities given, add:—Panama, Bugaba, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Dr. Signoret has separated, under the name of *P. confusus*, the Mexican and North-American specimens hitherto considered as representives of *P. margo*, relying upon differences of punctuation, particularly upon that of the costal area of the corium. In typical *P. margo* this area is almost levigate, while in *P. confusus* it is thickly punctate; but specimens from the intermediate localities, such as Guatemala, are also intermediate in this character, and I therefore prefer to let the species (a variable one) remain as before.

7. Pangæus rugifrons.

Pangœus rufifrons (p. 7).

By a misprint this name appeared as "*rufifrons.*" Signoret has since seen Prof. Uhler's specimens identified as belonging to this species, and considers them as not conspecific. The habitat "North America," given on Uhler's authority, must therefore, on these considerations, be withdrawn.

8. Pangæus serripes.

Cydnus serripes, Hope, Cat. Hem. i. p. 19 [1].

Æthus castanus, Dall. List Hem. i. p. 115.

Pangœus serripes, Sign. Ann. Soc. Ent. Fr. sér. 6, ii. p. 247. 3, t. 8 (Cydnides, t. 13) f. 106 [2].

Hab. Mexico [2].—Antilles, St. Vincent [1]; South America [2].

9. Pangæus sallæi.

Pangœus sallei, Sign. Ann. Soc. Ent. Fr. sér. 6, ii. p. 262. 18, t. 9 (Cydnides, t. 14) f. 119 [1].

Hab. Mexico [1].—Venezuela, La Guayra [1].

10. Pangæus minimus.

Pangœus minimus, Sign. Ann. Soc. Ent. Fr. sér. 6, ii. p. 265. 22, t. 9 (Cydnides, t. 14) f. 123 [1].

Hab. Mexico [1].

ECTINOPUS (p. 7).

Ectinopus holomelas (p. 8).

To the localities given, add:—GUATEMALA, Panzos (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba, Volcan de Chiriqui 4000 to 6000 feet, San Feliz, Tolé (*Champion*).

GEOTOMUS. (To follow the genus *Canthophorus*, p. 9.)

Geotomus, Mulsant et Rey, Punaises de France, p. 34 (1866); Signoret, Ann. Soc. Ent. Fr. sér. 6, iii. p. 33 (1883).

This genus is represented in nearly all parts of the world, including Australia, the temperate, Palæarctic, and Nearctic regions, and the tropical and subtropical parts of America, Africa, and Asia. Dr. Signoret has recorded three species from Mexico.

1. **Geotomus semilevis.**

Geotomus semilevis, Sign. Ann. Soc. Ent. Fr. sér. 6, iii. p. 44. 14, t. 3 (Cydnides, t. 18) f. 153 [1].

Hab. MEXICO [1].

2. **Geotomus crenatus.**

Geotomus (*Melanæthus*) *crenatus*, Sign. Ann. Soc. Ent. Fr. sér. 6, iii. p. 208. 33, t. 4 (Cydnides, t. 19) f. 171 [1].

Hab. MEXICO [1].

3. **Geotomus spinolæ.**

Æthus spinolæ, Sign. Ann. Soc. Ent. Fr. sér. 4, iii. p. 545, t. 12. f. 12 [1].

Melanæthus spinolæ, Uhler, Bull. U. S. Geol. & Geogr. Surv. iii. p. 392 [2].

Geotomus (*Cydnus*) *spinolai*, Sign. Ann. Soc. Ent. Fr. sér. 6, iii. p. 209. 34, t. 4 (Cydnides, t. 19) f. 172 [3].

Hab. MEXICO [3].—ANTILLES, Cuba [2 3]; CHILI [1 2 3].

AMNESTUS. (To precede the genus *Thyreocoris*, p. 9.)

Amnestus, Dallas, List Hem. i. pp. 110, 126 (1851); Signoret, Ann. Soc. Ent. Fr. sér. 6, iii. p. 367 (1883).

Magoa, Stål, Rio Hem. i. p. 13 (1860).

This genus, of which Signoret has enumerated eight species, is common to the Nearctic and Neotropical regions.

1 **Amnestus brunneus.**

Amnestus brunneus, Sign. Ann. Soc. Ent. Fr. sér. 6, iii. p. 370, t. 10 (Cydnides, t. 22) f. 194 [1].

Hab. MEXICO [1].

THYREOCORIS (p. 9).

Thyreocoris cærulescens (p. 10).

To the localities given, add:—MEXICO (*Sallé*), Pinos Altos in Chihuahua (*Buchan-Hepburn*).

Thyreocoris rastratus (p. 10).

To the localities given, add:—GUATEMALA, Cahabon, San Gerónimo, Guatemala city, Zapote (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet, Caldera (*Champion*).

Thyreocoris lateralis (p. 11).

To the localities given, add:—MEXICO, Ciudad in Durango (*Forrer*).

Thyreocoris pulicarius (p. 11).

To the localities given, add:—MEXICO, Ventanas in Durango (*Forrer*).

6 (A). **Thyreocoris marginellus.** (Tab. XXX. fig. 1.)

Corimelæna marginella, Dall. List Hem. i. p. 59. 12[1].
Thyreocoris marginella, Stål, En. Hem. v. p. 23. 10[2].

Hab. NORTH AMERICA[1 2].—BRITISH HONDURAS, R. Hondo (*Blancaneaux*).

This species, as already stated, is allied to *T. championi*, Dist. (p. 11), but the form of the margins of the corium, as seen at the lateral edges of the scutellum, will, apart from structural differences, separate the two species.

Thyreocoris guttiger (p. 11).

To the localities given, add:—PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet, David (*Champion*).

Thyreocoris incertus (p. 12).

To the localities given, add:—PANAMA, Bugaba (*Champion*).

10. **Thyreocoris signatipennis.**

Odontoscelis signatipennis, Germ. Zeitschr. 1, i. p. 42. 12[1]; H.-S. Wanz. Ins. v. pp. 34, 35, f. 484[2].
Thyreocoris signatipennis, Stål, En. Hem. v. p. 24. 18[3].

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Panzos, Chacoj, and San Juan in Vera Paz (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet, David (*Champion*).—BRAZIL[1 2 3], Pernambuco (*coll. Dist.*).

CYRTASPIS (p. 12).

2. **Cyrtaspis trinotata,** n. sp. (Tab. XXX. fig. 10.)

Black, shining, with three large dull reddish spots—situate one on the disk of the pronotum at the base, and two (contiguous) on the disk of the scutellum. Eyes luteous. Body above irregularly and sparsely punctate, the spots levigate. (Underside of the body undescribed, owing to the specimen being carded.)
Long. 2 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Only one specimen of this very distinct species was captured by Mr. Champion.

ALKINDUS, gen. nov. (To follow *Cyrtaspis*, p. 12.)

Allied to *Thyreocoris*, but differing in the shape and size of the head, which is broad (not quite twice as broad as long), convexly lunate, the anterior margins somewhat reflexed and coarsely punctate, and the central lobe just reaching the anterior margin.

This genus, by the shape of the head, has a relationship to the subfam. Plataspinæ, which as yet is without a recorded American representative; but the general structure shows the close connection of *Alkindus* with *Thyreocoris*.

1. **Alkindus atratus,** n. sp. (Tab. XXX. fig. 2.)

Black, shining; eyes paler; antennæ and tarsi castaneous. Body convex, robust. Head with the frontal margin widely, thickly, and coarsely punctate. Pronotum foveate at base near each lateral angle, the lateral margins broadly and coarsely punctate, the disk sparingly and finely punctate. Scutellum not quite reaching the apex of the abdomen, sparingly and finely punctate, more coarsely and thickly punctate towards the lateral margins. (Body beneath undescribed, owing to specimens being carded.)
Long. 5 to 5½ millim.

Hab. PANAMA, Tolé (*Champion*).

Two specimens, both carded, are all I have seen of this species, and these apparently represent the sexes. The female thus appears to be smaller than the male. The scutellum of the former does not quite so nearly reach the apex of the abdomen.

CHLÆNOCORIS. (To precede the Scutellerinæ, p. 12.)

Chlænocoris, Burmeister, Handb. ii. 1, p. 383 (1835); Germar, Zeitschr. 1, i. p. 22 (1839); Dallas, List Hem. i. p. 61 (1851).

According to our present knowledge this is a purely Neotropical genus. It has not hitherto been recorded so far north as our region, whence we have now received three species, and doubtless others remain to be discovered.

The hemispherical body and long, narrowed, pointed head, considerably narrower

than the anterior margin of the pronotum, will effectually distinguish *Chlænocoris* from the other genera here enumerated.

1. **Chlænocoris cæsus.**

Chlænocoris cæsus, Germ. Zeitschr. i. p. 62. 1; H.-S. Wanz. Ins. v. p. 28, f. 479[1]; Dall. List Hem. i. p. 62. 1[2].

Hab. NICARAGUA, Chontales (*coll. Dist.*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).—SOUTH AMERICA [1], Pará [2].

The figures given by Herrich-Schäffer of this species and of *C. impressus*, Fabr. (of which I possess an example from Colombia), are not sufficiently dark in coloration. *C. impressus* can be distinguished from *C. cæsus* by its somewhat larger size, the subprominent pronotal angles, and, according to the figure referred to, by the different colour of the antennæ.

2. **Chlænocoris dissimilis**, n. sp. (Tab. XXX. fig. 3.)

Shining black; eyes luteous; antennæ castaneous. (Underside of the body undescribed, owing to specimens being carded.) Body very convex and gibbous, but oblong (by which last character *C. dissimilis* differs from all other described species of the genus). Very obscurely, sparingly, and finely punctate; the anterior lateral angles of the pronotum subprominent and rounded. Besides being more oblong, *C. dissimilis* is also more gibbous than other previously described species of the genus.

Long. 5 millim.

Hab. NICARAGUA, Chontales (*Janson*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

3. **Chlænocoris compressus**, n. sp. (Tab. XXX. fig. 11.)

Allied to *C. dissimilis*, but differing in the very much narrower and more compressed body; pronotum not laterally emarginate as in *C. dissimilis*, not wider than the eyes at apex. Body above shining black, with some very obscure chocolate reflections; eyes luteous.

Long. 4 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

We have only received a single specimen of this species.

TETYRA (p. 13).

Tetyra arcuata (p. 13).

To the localities given, add:—MEXICO, Jalapa (*Höge*).

Tetyra farcta (p. 14).

To the localities given, add:—MEXICO (*Sallé*), Tepic (*Schumann*), Acaguizotla and Savana Grande in Guerrero (*H. H. Smith*), Jalapa (*Höge*).

4. **Tetyra pinguis.**

Pachycoris pinguis, Germ. Zeitschr. 1, i. p. 91. 19; H.-S. Wanz. Ins. v. p. 7, f. 462[1]; Dall. List Hem. i. p. 31. 1[2].

Hab. MEXICO, Tepic (*Schumann*).—ANTILLES, Jamaica[2]; GUIANA, Cayenne[2]; BRAZIL[1].

This species and *T. farcta*, Germ., are certainly very closely allied, if not actually varieties of one species; I have, nevertheless, followed Stål in keeping them distinct in this enumeration; he, however, recorded the qualifying remark "a præcedente vix distincta."

PACHYCORIS (p. 14).

Pachycoris torridus (p. 14).

To the localities given, add:—MEXICO (*Sallé*), Ventanas in Durango (*Forrer*), Venta de Zopilote and Omilteme in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*), Jalapa (*F. D. G., Höge*), Cuesta de Misantla (*M. Trujillo*), Temax in North Yucatan (*Gaumer*) (vars. *a*, *c*, *d*, *e*); GUATEMALA, Chacoj (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui, Tolé (*Champion*) (var. *i*).

ACHATES. (To precede the genus *Orsilochus*, p. 16.)

Achates, Stål, Öfv. Vet.-Ak. Förh. 1867, p. 492.

This genus is confined to the Nearctic and Neotropical regions; three species have been enumerated by Stål (En. Hem. i. p. 9), and a fourth is now added as belonging to it.

1. **Achates ramosus,** n. sp. (Tab. XXX. fig. 4.)

Ochraceous, an oblique sanguineous abbreviated fascia near each lateral margin of the pronotum, a central longitudinal fascia to the head and four fasciæ to the pronotum (the two central abbreviated and straight, the other two longer, irregular, and curved), chocolate-brown. Scutellum with some dark longitudinal fasciæ and the apical third and two central wedge-shaped fasciæ chocolate-brown. Connexivum ochraceous. Body beneath and legs ochraceous; the lateral areas of the sternum, the apex of the abdomen, and the apices of the tibiæ and the tarsi brownish. Eyes and antennæ (the basal joint excepted) fuscous. Antennæ with the third joint longer than the second; fourth and fifth joints longest and subequal in length. Rostrum reaching the posterior coxæ. The head is coarsely punctate at the area of the central lobe and behind the eyes; pronotum and scutellum coarsely punctate.

Long. 10 millim., lat. pronot. angl. 6 millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

Only one specimen of this species was sent home by Mr. Champion.

ORSILOCHUS (p. 16).

Orsilochus variabilis (p. 17).

To the localities given, add:—MEXICO (*Sallé*), Presidio, Ventanas (*Forrer*), Tepic (*Schumann*), Venta de Zopilote, Hacienda de la Imagen, Tepetlapa, Chilpancingo, Rincon,

R. Papagaio, Dos Arroyos, Venta de Pelegrino, Mescala, and Tierra Colorada in Guerrero, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Jalapa (*F. D. G.*), Temax in North Yucatan (*Gaumer*).

Orsilochus sticticus (p. 18).

To the localities given, add:—MEXICO, Temax in North Yucatan (*Gaumer*); GUATEMALA, Panzos in Vera Paz (*Champion*).

Orsilochus scurrilus (p. 18).

To the localities given, add:—MEXICO, Presidio, Mazatlan (*Forrer*), Tepic (*Schumann*), Tepetlapa in Guerrero (*H. H. Smith*).

4. **Orsilochus (?) diversus,** n. sp. (Tab. XXX. fig. 12.)

Reddish-ochraceous; head with the margins of the central lobe distinctly darker; pronotum with reticulated fuscous linear markings; scutellum crossed by two much waved and sinuated fasciæ outwardly margined with fuscous, the first of which crosses at the base, and the second on the posterior portion of the disk, and disconnected at the centre, two similarly margined spots at the apex; legs ochraceous, tarsi fuscous; antennæ black, the basal joint reddish-ochraceous. Antennæ with the second and third joints short and subequal in length; fourth and fifth joints the longest, subequal in length and deeply sulcated. Head very coarsely punctate at the margins of the central and lateral lobes; pronotum sparingly and coarsely punctate, except at the anterior and lateral margins, where the punctures are much more numerous; scutellum with a distinct convex incision near the base, and coarsely but sparingly punctate.

Long. 9 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

The structure of the antennæ, in connection with the very distinct basal impression to the scutellum, renders this species very distinct from the other members of the genus here enumerated, even if it really belongs to *Orsilochus*, or does not, rather, in itself exhibit the characters of an undescribed genus. One specimen only, and that a carded one, does not give facility for generic diagnosis, and therefore I have placed it provisionally as above.

AGONOSOMA. (To follow the genus *Dystus*, p. 18.)

Agonosoma, Laporte, Ess. Hem. p. 69 (1832); Dallas, List Hem. i. p. 5 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 494.

This genus is allied to *Tiridates*, which in this publication immediately follows it, and it can at once be distinguished from that genus by the shape of the odoriferous apertures, which are somewhat long and moderately curved, whilst in *Tiridates* they are short and straight.

This Neotropical genus contains two species, one of which is of an exceedingly protean character.

1. **Agonosoma trilineatum.** (Tab. XXX. fig. 5, var. *a*.)

Cimex trilineatus, Fabr. Spec. Ins. ii. p. 341. 14; Mant. Ins. ii. p. 281. 16; Gmel. Syst. Nat. i. 4, p. 2130. 152; Fabr. Ent. Syst. iv. p. 85. 21.
Tetyra trilineata, Fabr. Syst. Rhynch. p. 135. 31.
Cimex trivittatus, Panz. in Voet's Beschr. Ins. iv. p. 111. 12, t. 47. f. 12.
Scutellera dichroa, Perty, Del. Anim. p. 164, t. 33. f. 2 [1].
Pachycoris virgatus, Germ. Zeitschr. i. 1, p. 102. 42, t. 1. f. 6.
Pachycoris dichrous, Germ. Zeitschr. i. 1, p. 103. 45.
Pachycoris bigatus, Germ. Zeitschr. i. 1, p. 102. 41.
Agonosoma bicolor, Hope, Cat. Hem. i. p. 12.
Agonosoma reichii, Spin. Ess. Hém. p. 361 [2].
Agonosoma dichroum, A. & S. Hist. des Hém. p. 45. 2 [3]; Dall. List Hem. i. p. 42. 3 [4].
Agonosoma trivittatum, Dall. List Hem. i. p. 42. 2 [5].
Agonosoma flavipes, Dall. List Hem. i. p. 42. 4 [6].
Agonosoma trilineatum, Stål, En. Hem. i. p. 12. 1 [7].
Var. *a*. Stål, En. Hem. i. p. 12.
Var. *c*. Stål, En. Hem. i. p. 13.

Hab. PANAMA (*Boucard*), Matachin (*coll. Dist.*).—COLOMBIA [4 5 6], Bogota [7]; VENEZUELA [7]; GUIANA [5], Cayenne [3 4]; AMAZONS, Pará [2 4]; BRAZIL [4], Bahia [1].

Two specimens from Panama are respectively the vars. *a* and *c*, Stål, as above, and the var. *a* is now figured for the first time.

TIRIDATES (p. 18).

Tiridates mexicanus (p. 19).

To the locality Mexico, add:—Venta de Pelegrino in Guerrero (*H. H. Smith*), Tepic (*Schumann*), Temax in North Yucutan (*Gaumer*).

Tiridates rubro-cinctus (p. 19).

To the locality Mexico, add:—Atoyac in Vera Cruz (*Schumann*), Jalapa (*Höge*).

LOBOTHYREUS. (To follow the genus *Tiridates*, p. 19.)

Lobothyreus, Mayr, Verh. zool.-bot. Ges. Wien, xiv. p. 904 (1864); Reise der Freg. Novara, Hem. p. 29 (1866).

This distinct genus, which can be readily distinguished from any other belonging to the Scutellerinæ known to our fauna, by the elongated and depressed head, contains three species, one of which is now for the first time described. The other two also belong to the Neotropical region, but doubtless others remain to be discovered.

1. **Lobothyreus ansatus,** n. sp. (Tab. XXIX. fig. 22.)

Fuscous-brown; the head, the disk of the pronotum, the base of the scutellum, and a semicircular spot at the apex of the scutellum, ochraceous. Body beneath and the legs fuscous; disk of the sternum beneath,

femoral markings, tarsi, and the apex of the abdomen ochraceous; antennæ chocolate-brown, about the apical half of the fourth joint and the apex of the fifth joint ochraceous. The antennæ have the second and third joints short and subequal in length; fourth and fifth joints much longer, but also subequal in length. The pronotal angles are laminately lobate, and very dark in hue. The extreme margins of the corium, as seen beyond the lateral margins of the scutellum, are dark ochraceous spotted with fuscous.

Long. 9 millim., lat. pronot. angl. 7 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

One specimen only of this distinct and interesting species was sent home by Mr. Champion.

HOMÆMUS (p. 19).

4. **Homæmus retostus,** n. sp. (Tab. XXX. fig. 6.)

Reddish-brown, somewhat pilose; head with the margins of the central lobe and the eyes blackish; pronotum with three semicircular castaneous fasciæ, two connected at the base, and the third intermediate between these and the anterior margin, and having a short black fascia on each side; scutellum with a central fascia, which is duplex and convex at the base, and terminating in a pale spot at the apex, and on each lateral area two outwardly curved castaneous fasciæ. Body beneath and legs brownish-ochraceous; rostrum and apices of the tarsi piceous. Antennæ brownish-ochraceous, the fourth and fifth joints more or less piceous, subequal and longest.

Long. 7 millim.

Hab. MEXICO, Atoyac in Vera Cruz (*Schumann*).

5. **Homæmus fumeus,** n. sp. (Tab. XXX. fig. 7.)

Brownish-ochraceous, thickly and darkly punctate, and somewhat pilose; head with the base, the lateral margins, and the margins of the central lobe, piceous; pronotum with two large semicircular black fasciæ at the base, two transverse black fasciæ on the anterior portion of the disk, and two short oblique black fasciæ on each lateral area; scutellum with a central black fascia, widened and convex at the base, and terminating in three pale spots at the apex, and with about four curved and irregular black fasciæ on each lateral area; body beneath and the legs piceous, the coxæ and the bases of the femora luteous; tibiæ and tarsi ochraceous spotted with piceous. Rostrum ochraceous, the apex piceous. (Antennæ mutilated.)

Long. 6 millim.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*), Orizaba (*F. D. G.*).

SPHYROCORIS (p. 20).

Sphyrocoris elongatus (p. 21).

To the localities given, add:—MEXICO, Presidio (*Forrer*), Atoyac in Vera Cruz (*H. H. Smith*); PANAMA (*Boucard*).

SYMPHYLUS (p. 22).

Symphylus deplanatus (p. 22).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*); PANAMA, Bugaba, David, Caldera, Tolé (*Champion*).

2. **Symphylus plagiatus** (p. 22).

To the localities given, add :—MEXICO, Presidio (*Forrer*), Atoyac in Vera Cruz (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); GUATEMALA, Capetillo, Dueñas, San Juan in Vera Paz (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Caldera in Chiriqui (*Champion*), Matachin (*coll. Dist.*).

3. **Symphylus modestus** (p. 22).

To the localities given, add :—PANAMA, Bugaba, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

4 (A). **Symphylus ramivitta.** (Tab. XXIX. fig. 23.)

Symphylus ramivitta, Walk. Cat. Het. iii. p. 518[1].

Hab. BRITISH HONDURAS, Belize (*Blancaneaux*).—AMAZONS[1].

One specimen of this species has been received from M. Blancaneaux. Although not met with by Mr. Champion, it is probably to be found in some of the intermediate regions.

Symphylus gibbosus (p. 23).

To the locality given, add :—PANAMA, Bugaba (*Champion*).

5 (A). **Symphylus albomaculatus,** n. sp. (Tab. XXX. fig. 8.)

Dull obscure ochraceous, somewhat thickly and darkly punctate; head with many and almost confluent black punctures; pronotum with some obscure longitudinal and oblique black fasciæ on the disk; scutellum with a transverse waved black fascia across the disk continued at the centre to the apex, where it bifurcates and encloses a pale ochraceous spot, a large whitish spot near the centre of each lateral margin. Antennæ brownish-ochraceous, the apex of the fourth joint luteous; fourth joint the longest, the third joint shorter than the second. (Body beneath undescribed, owing to the specimen being carded.)

Long. 5 millim.

Hab. PANAMA, Bugaba, David (*Champion*).

5 (B). **Symphylus vernus,** n. sp. (Tab. XXIX. fig. 25.)

Ochraceous, with scattered green markings, which are irregular in number and shape, but usually consist of two small or one large central spot on the pronotum, and a spot on the disk and the apical margin of scutellum. Antennæ greenish, the fourth joint (excluding base) and the fifth joint dark olivaceous. Body beneath and legs ochraceous, the apices of the femora, the tibiæ and tarsi greenish.

Long. $5\frac{1}{2}$–6 millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*); PANAMA, Bugaba (*Champion*).

In some specimens the green markings are altogether absent.

This species and *S. albomaculatus*, described above, belong to the section of the genus represented by *S. gibbosus*, in which the body is short and broad, and the species small in size and gibbous in appearance.

GALEACIUS, gen. nov. (To follow the genus *Symphylus*, p. 24.)

Head very slightly longer than broad, feebly sinuated in front of the eyes, the central lobe longer than the lateral lobe. Pronotum more than twice as broad as the head, the lateral margins ampliated, the basal and anterior margins subequal in length. Scutellum a little longer than the abdomen. Meso- and metasternum with a strong central longitudinal sulcation.

1. **Galeacius tessellatus,** n. sp. (Tab. XXIX. fig. 24.)

Purplish-brown, with the following ochraceous markings:—Pronotum with the lateral areas, three spots on the anterior margin, and four spots at the base, the two central of which are very small and obscure; scutellum with two basal spots, two spots on each lateral margin, a large apical spot, and a large discal streak much waved and sinuated extending from the disk, where it is bifurcate, to the lateral margin before the apex, and where it is deeply notched. Body beneath purplish-brown, the larger part of the sternum and a large basal spot to the abdomen ochraceous; a central spot on the meso- and metasternum reaching the base of the abdomen black. Legs ochraceous, mottled with purplish. Rostrum reaching the posterior coxæ. (Antennæ mutilated.)

Long. 7 millim., lat. pronot. angl. 5 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

CAMIRUS (p. 24).

Camirus conicus (p. 24).

To the localities given, add:—MEXICO (*Sallé*); PANAMA, Bugaba, David (*Champion*).

Camirus mœstus (p. 24).

To the locality Mexico, add:—Temax in North Yucatan (*Gaumer*).

4. **Camirus pullatus,** n. sp. (Tab. XXX. fig. 9.)

Black, oblong, conical, obscurely pilose. Pronotum with a very distinct transverse impression terminating in a small fovea on each side near the lateral margins. Scutellum with two transverse impressions near the base, and two much sinuated and bent longitudinal impressions on each lateral area. The whole surface very coarsely punctate.

Long. 5 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).—COLOMBIA, Bogota (*coll. Dist.*).

The black coloration and the sculpture of the body above will at once separate this species from the others here enumerated as found in our fauna.

STIRETRUS (p. 26).

Stiretrus cæruleus (p. 27).

To the localities given, add:—MEXICO (*Sallé*), Acapulco, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucutan (*Gaumer*); PANAMA, David (*Champion*).

Stiretrus ruficeps (p. 27).

To the localities given, add:—MEXICO, Temax in Yucatan (*Gaumer*).

Stiretrus flavipes (p. 27).

To the localites given, add:—Mexico, Tepic (*Schumann*).

5 (a). **Stiretrus annulatus,** n. sp. (Tab. XXX. fig. 13.)

Dark shining blue; antennæ with the basal joint bluish, the second and third joints luteous, the apical half of the third bluish (remainder mutilated). Body beneath and legs shining blue; intermediate and posterior tibiæ broadly annulated with ochraceous. Body above coarsely but sparingly punctate, excepting at the lateral margins of the corium, where the punctures are very numerous and coarse. Antennæ with the third joint a little shorter than the second.

Long. 10 millim.

Hab. Mexico, Tepic (*Schumann*).

This is a fifth form of the subgenus *Oncogaster*, Stål; the colour of the legs, its larger size, and somewhat well-developed pronotal angles, will sufficiently distinguish it from the other species here enumerated.

Stiretrus anchorago (p. 28).

To the localities given, add:—Mexico (*Sallé*), Tepic (*Schumann*), Acapulco in Guerrero, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Jalapa (*Höge*), Temax in North Yucatan (*Gaumer*); Guatemala, Chiacam (*Champion*); Panama, David (*Champion*).

OPLOMUS (p. 29).

Oplomus dichrous (p. 29).

To the localities given, add:—

Var. *a*. Mexico, Jalapa (*Höge*), Amula, Xucumanatlan, and Chilpancingo in Guerrero (*H. H. Smith*).

Var. *b*. Mexico, Amula in Guerrero (*H. H. Smith*).

Var. *c*. Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*), Tepic (*Schumann*), Xucumanatlan (*H. H. Smith*); Cuesta de Misantla (*M. Trujillo*), Jalapa (*F. D. G.*, *Höge*).

Var. *d*. Mexico, Tepic (*Schumann*).

Var. *e*. Mexico, Amula in Guerrero (*H. H. Smith*).

Oplomus nigripennis (p. 31).

To the locality given, add:—Mexico, Presidio (*Forrer*), Jalapa (*F. D. G.*); Guatemala, Las Mercedes (*Champion*).

Oplomus rutilus (p. 31).

To the localities given, add:—Mexico, Jalapa (*F. D. G.*).

HETEROSCELIS (p. 32).

Heteroscelis lepida (p. 33).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

PERILLUS (p. 33).

Perillus confluens (p. 33).

To the localities given, add:—MEXICO, Chilpancingo and Amula in Guerrero (*H. H. Smith*), Jalapa (*M. Trujillo*), Orizaba (*H. H. Smith, F. D. G.*).

CORYZORHAPHIS (p. 34).

Coryzorhaphis cruciata (p. 35).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann*), Cuesta de Misantla (*M. Trujillo*); GUATEMALA, near the city (*Champion*).

MUTYCA (p. 35).

Mutyca grandis (p. 36).

To the localities given, add:—MEXICO, Cuesta de Misantla (*M. Trujillo*), Atoyac in Vera Cruz (*Schumann*), Jalapa (*Höge*).

PODISUS (p. 36).

Podisus lineolatus (p. 36).

To the localities given, add:—MEXICO, Jalapa (*Höge*), Amula in Guerrero (*H. H. Smith*); GUATEMALA, Cerro Zunil, Purula, San Joaquin, Senahu, Sabo, El Jicaro, Dueñas (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Podisus sagitta (p. 37).

To the localities given, add:—MEXICO, Venta de Zopilote in Guerrero, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*); GUATEMALA, Panzos, Cahabon, Tocoy (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

4 (A). **Podisus falcatus,** n. sp. (Tab. XXIX. fig. 18.)

Above pale reddish; antennæ, lateral margins of the pronotum, body beneath, and legs luteous; membrane hyaline, with the basal half and an apical spot fuscous; margins of the head beneath, pronotal angles beneath, and a subapical spot on the abdomen purplish-red. Antennæ with the second and fourth joints subequal and longest, third and fifth joints also subequal but shorter. Pronotum coarsely punctate, the lateral angles strongly produced, somewhat notched near the apices, which are slightly directed backwardly; scutellum coarsely punctate, with a faint central longitudinal line crossing both it and the pronotum; corium more finely punctate. Ventral spine short; anterior lateral margins of the pronotum crenulated. Long. 11 millim., lat. pronot. angl. 7 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

P. falcatus is apparently closely allied to the *Arma cornuta*, Dall. (List Hem. i. p. 98), recorded from Colombia; but no specimen of that species is now contained in the National Collection, nor was it enumerated by Walker in his subsequent catalogue.

Podisus affinis (p. 38).

To the localities given, add:—GUATEMALA, Zapote, San Juan in Vera Paz (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 3000 to 6000 feet (*Champion*).

8 (A). **Podisus smithi,** n. sp. (Tab. XXX. fig. 14.)

Body and antennæ very dark olivaceous, almost pale blackish; base and apex of third joint of antennæ, fifth joint (excluding apex), lateral margins of the pronotum, rostrum, legs, and a subapical spot to abdomen beneath, luteous; apical joint of rostrum and a spot near the apices of the femora pale blackish. Head coarsely punctate; antennæ with the second and fourth joints longest, the second a little longer than the fourth, the third and fifth joints shorter and subequal in length; pronotum coarsely punctate and rugulose, the lateral angles prominent and with their apices subacute; anterior lateral margins crenulated; scutellum coarsely punctate and rugulose, with a distinct raised central longitudinal line on the apical half and the apex very slightly foveate; corium finely punctate, the lateral margin coarsely punctate; ventral spine short, not passing the posterior coxæ.

Long. 13 millim., lat. pronot. angl. 8 millim.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. G.*).

Podisus nigriventris (p. 39).

To the locality given, add:—PANAMA, David, Volcan de Chiriqui (*Champion*).

Podisus congrex (p. 40).

To the localities given, add:—MEXICO, Xucumanatlan and Omilteme in Guerrero (*H. H. Smith*); PANAMA, Volcan de Chiriqui 3000 to 6000 feet (*Champion*).

11 (A). **Podisus amulæ,** n. sp. (Tab. XXX. fig. 15.)

Head, pronotum, and scutellum ochraceous, corium reddish-ochraceous; antennæ ochraceous, fourth and fifth joints darkest, apical joint with the basal half pale ochraceous; eyes dark castaneous; membrane fuscous at base, the apical half hyaline. Body beneath and legs ochraceous; abdomen with a curved sanguineous fascia on each side of the posterior disk, the apical portion of the lateral margins and an apical spot black; antennæ with the second and fourth joints subequal in length, the third and fifth joints shorter but also subequal in length. Head coarsely punctate on the lateral lobes and at the base of the central lobe. Pronotum very coarsely punctate, with a slight transverse ridge near the anterior margin, the anterior lateral margins crenulate, the lateral angles produced into somewhat long acute spines. Scutellum with a small fovea in each basal angle, coarsely punctate, the punctures thicker and arranged in two parallel rows or fasciæ on the apical area; corium with the punctures finer, excepting on the lateral margins, where they are coarse; apical margin of the corium slightly sinuate; membrane extending considerably beyond the apex of the abdomen. Rostrum reaching the posterior coxæ; ventral spine short.

Long. 11 millim., lat. pronot. angl. 6 millim.

Hab. MEXICO, Amula in Guerrero (*H. H. Smith*).

Podisus thetis (p. 40).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); PANAMA, Bugaba, Volcan de Chiriqui 4000 to 6000 feet, David (*Champion*).

Podisus acutissimus (p. 40).

To the localities given, add:—MEXICO, Presidio (*Forrer*).

15 (A). **Podisus gaumeri,** n. sp. (Tab. XXX. fig. 16.)

Pale luteous; antennæ with the first and third joints luteous, the second joint brownish (remainder mutilated); scutellum with a pale levigate spot near each basal angle, and a smaller spot at the centre of the basal margin, a **V**-shaped black fascia at the apex, the apical margin pale luteous. Body beneath and legs luteous; eyes black; ocelli red. The head is levigate, with a few obscure wrinkles, the apex of the central lobe being somewhat blackish; the pronotum is coarsely punctate, excepting near the anterior margin where there is a transverse levigate ridge, anterior lateral margins crenulate, lateral angles produced into short, thick, somewhat obtuse spines. Scutellum with a small fovea in each lateral angle, the lateral margins and apical area (excluding apical margin) coarsely punctate. Corium finely punctate, more coarsely so on the lateral margin and near the base; membrane hyaline, with a central fuscous fascia extending a little beyond the apex of the abdomen. Ventral spine strong, robust, extending a little in front of the posterior coxæ.

Long. 9 millim.

Hab. MEXICO, Temax in North Yucatan (*Gaumer*).

Podisus clœlia (p. 41).

To the locality given, add:—PANAMA, Volcan de Chiriqui 2500 to 4000 feet, Tolé (*Champion*).

18. **Podisus sculptus,** n. sp. (Tab. XXIX. fig. 16.)

Above brownish-ochraceous; head with three obscure ochraceous fasciæ, one on each lateral lobe and one on the central lobe; pronotum with the anterior and lateral margins and two raised levigate transverse fasciæ on the anterior portion of the disk, connected together at centre and lateral margins, ochraceous, lateral angles black; scutellum with a large levigate spot near each basal angle, a smaller spot at centre of base and the apex luteous; membrane hyaline, with two central fuscous fasciæ. Body beneath and legs luteous; apex of rostrum, sternal and abdominal incisures, some short curved linear fasciæ on the sternum and short linear stigmatal fasciæ to the abdomen pale castaneous. Antennæ ochraceous, second and fourth joints longest and subequal in length, third and fifth joints shorter and also subequal in length. Head with some very coarse punctures. Pronotum coarsely punctate, excepting in levigate portions, and very rugulose, the anterior lateral margins obscurely crenulate, the lateral angles produced into long and strong spines, subacute at the apices, and prominently notched posteriorly near the apex. Scutellum sparingly and coarsely punctate, except on the levigate spots and apex; corium finely punctate; ventral spine short.

Long. 11 millim., lat. pronot. angl. 7 millim.

Hab. PANAMA, Bugaba (*Champion*).

EUTHYRHYNCHUS (p. 41).

Euthyrhynchus floridanus (p. 41).

To the localities given, add:—MEXICO (*Sallé*), Chilpancingo and Xucumanatlan in Guerrero (*H. H. Smith*), Cuesta de Misantla (*M. Trujillo*), Tepic, Atoyac in Vera Cruz (*Schumann*), Orizaba (*H. H. Smith & F. D. G.*); GUATEMALA, Teleman and San Juan in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

TYNACANTHA (p. 42).

The single species I included in *Tynacantha* belongs to the following genus, *Supputius*; a true species of *Tynacantha* has, however, since been received from the southern part of our region.

1. **Tynacantha splendens,** n. sp. (Tab. XXIX. fig. 15.)

Body above metallic purplish, with green reflexions particularly on the head and anterior portion of the pronotum; lateral margins of the pronotum, apex of the scutellum, body beneath, and legs luteous; abdominal incisures, two series of segmental spots on each lateral area of the abdomen—one marginal and one discal,—stigmatal spots, and a transverse spot on the metasternum, dark shiny green. Antennæ ochraceous, second and third joints subequal in length; head and pronotum sparingly but coarsely punctate; pronotum with the lateral angles subprominent, but not angularly produced; scutellum very obscurely punctate, excepting the apex, which is levigate; connexivum alternately ochraceous and green. Ventral spine and rostrum reaching the posterior coxæ.

Long. 9 millim.

Hab. PANAMA, Bugaba (*Champion*).

SUPPUTIUS, gen. nov. (To follow the genus *Tynacantha*, p. 43.)

Allied to *Tynacantha*, but differing in the more elongate body, the lateral angles of the pronotum sometimes distinctly produced, the anterior pronotal lateral margins denticulated, and the second joint of the antennæ distinctly longer than the third; other characters as in *Tynacantha*.

The late Dr. Stål, who correctly diagnosed the genus *Tynacantha* (Öfv. Vet.-Ak. Förh. 1867, p. 497), certainly included in the enumeration of its species at least one which differs in the above characteristics, and which, following him, I thus classified in this work. I now propose the above genus to contain that and another new species which is here described.

1. **Supputius pulchricornis.**

Tynacantha pulchricornis, huj. op. p. 43.

2. **Supputius typicus,** n. sp. (Tab. XXIX. fig. 17.)

Very pale ochraceous, with coarse dark punctures; outer margins of the head—excepting the apex of the central lobe,—eyes, sublateral margins to the pronotum, a foveate spot at each basal angle of the scutellum,

marginal spots to the connexivum, two small spots on each side of the pro- and mesosternum, apex of the odoriferous orifice, and a double series of small spots on each side of the abdomen, one discal and one marginal, dark olivaceous; antennæ with the basal joint ochraceous, the second joint castaneous, the remaining joints very pale castaneous; corium with an irregular, darker suffused tawny patch on each inner apical area; membrane pale tawny, extreme lateral margins and spines to pronotum luteous. Antennæ with the second joint longest, slightly longer than the fourth, third and fifth subequal in length; pronotal angles produced into distinct acute spines; anterior lateral margins of the pronotum distinctly crenulated.

Long. 12 millim., lat. pronot. angl. 6 millim.

Hab. PANAMA, Bugaba (*Champion*).

Allied to *S. pulchricornis*, but easily separated by the distinct pronotal spines, different colour, &c.

CYRTOCORIS (p. 43).

Cyrtocoris trigonus (p. 43).

To the localities given, add:—MEXICO, Ventanas (*Forrer*), Temax in North Yucatan (*Gaumer*); GUATEMALA, San Juan and Panzos in Vera Paz, Zapote, Pantaleon (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet, David, Caldera (*Champion*).

This species varies in hue from ashy-brown to piceous.

DISCOCEPHALA (p. 44).

Discocephala humilis (p. 45).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet, David (*Champion*).

Discocephala clypeata (p. 45).

To the localities given, add:—MEXICO, Acapulco and Amula in Guerrero, Teapa in Tabasco (*H. H. Smith*), Atoyac in Vera Cruz (*Schumann*).

Discocephala marginella (p. 45).

To the localities given, add:—GUATEMALA, San Gerónimo (*Champion*); PANAMA, Bugaba (*Champion*).

BEROALDUS, gen. nov. (To follow the genus *Discocephala*, p. 45.)

Head about twice as broad as long, the lateral lobes meeting beyond the central lobe; ocelli about equally as wide apart as from eyes; antennæ four-jointed. Rostrum inserted near the base of the head, the basal joint about extending to the anterior coxæ. Body elongate, subovate. Scutellum almost reaching the apex of the abdomen. Apical margin of the corium nearly straight, not sinuate.

The four-jointed antennæ allies this genus with *Phœacia*, Stål, from which it differs by having the base of the scutellum much broader than the head.

1. **Beroaldus erubescens,** n. sp. (Tab. XXIX. fig. 21.)

Ochraceous, darkly punctate, and more or less mottled with brownish. Head with the margins of the central lobe, the outer margins of the lateral lobes, and some punctures in front of the eyes brownish; eyes fuscous; ocelli reddish; antennæ with the first and second joints brownish, the base and apex of the second somewhat darker, third and fourth joints ochraceous, the base and apex of the third, and a large subapical annulation to the fourth, fuscous; pronotum very coarsely but sparsely punctate, the punctures dark brownish; scutellum with a somewhat testaceous tinge, punctures piceous at base and towards apex; corium with two large patches of black punctures; membrane fuscous, with the apex paler; connexivum spotted with fuscous. Body beneath and legs ochraceous; lateral margins and areas of the former pale brownish and somewhat punctate; legs, especially the tibiæ, spotted with brownish. Antennæ with the second joint a little shorter than third and fourth joints together, the third joint a little longer than the fourth.

Long. 11 millim.

Hab. GUATEMALA, Senahu in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

ARCHITAS, gen. nov. (To precede the genus *Dinocoris*, p. 45.)

Head at base about twice as broad as long; lateral lobes meeting in front of the central lobe; ocelli wider apart from each other than from the eyes; antennæ five-jointed, inserted beneath the head at about two thirds the distance from the apex to the eyes. Rostrum inserted near the base of the head, the basal joint reaching the anterior coxæ. Body broad, subovate; pronotum at the lateral angles twice as broad as the head, depressed from near the base to the head, the lateral angles obtusely and obscurely angulated. Scutellum extending to about three fourths the length of the abdomen. Apical margins of the corium straight. Mesosternum with a very slight and obscure central longitudinal keel; metasternum with a central, angulated and slightly elevated plate between the posterior legs; abdomen with an obtuse basal spine and a central longitudinal sulcation.

Allied to *Cataulax*, Spin., but differing from that genus as diagnosed by Stål (Öfv. Vet.-Ak. Förh. 1867, pp. 499, 500) in not having the head "æque longo ac lato vel longiore quam inter oculos latiore."

1. **Architas pudens,** n. sp. (Tab. XXIX. fig. 20.)

Ochraceous, coarsely and darkly punctate; head with the margins of the central lobe and a submarginal fascia to the lateral lobes formed of almost confluent brown punctures; eyes fuscous; ocelli reddish-ochraceous; antennæ dull ochraceous, first, second, and third joints spotted with fuscous; pronotum and scutellum somewhat sparingly covered with dark brown punctures; corium similarly darkly punctate, but with some discal patches of still darker punctures; membrane fuscous; connexivum with small dark marginal spots. Body beneath and legs pale reddish-ochraceous, with coarse reddish punctures, the lateral margins more or less testaceous, the legs spotted with fuscous. Antennæ with the second joint slightly longer than the third, fourth and fifth joints longest and subequal in length.

Long. 12 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

DINOCORIS (p. 45).

1 (A). **Dinocoris macraspis.** (Tab. XXIX. fig. 19.)

Pentatoma macraspis, Perty, Del. Anim. p. 166, t. 33. f. 7 [1].

Dinocoris macraspis, Burm. Handb. ii. 1, p. 364. 2 [2]; H.-S. Wanz. Ins. iii. f. 279.

Dinocoris annulatus, H.-S. Wanz. Ins. iii. p. 66 [3].

Cataulax macraspis, A. & S. Hist. des Hém. p. 112. 1 [4] (excl. syn. Spin.).
Antiteuchus annulatus, Dall. List Hem. i. p. 163. 1 [5].
D. (Dinocoris) macraspis, Stål, En. Hem. ii. p. 7. 1 [6].

Hab. PANAMA, David (*Champion*).—SOUTH AMERICA [3]; COLOMBIA, Bogota [6]; GUIANA, Cayenne [4]; BRAZIL [5 6], S. Paulo [1], Bahia [2].

Two specimens collected by Mr. Champion at David in Chiriqui enable us to add this southern species to our fauna.

Dinocoris piceus (p. 46).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Panzos, Chacoj (*Champion*); PANAMA, David (*Champion*).

2 (A). **Dinocoris complanatus**, n. sp. (Tab. XXXI. fig. 1.)

Body above and beneath, antennæ, rostrum, and legs castaneous; eyes dull ochraceous; bases and apices of tibiæ dull reddish. Head very coarsely punctate and rugulose at base; antennæ with the second and third joints subequal in length, fourth and fifth longest, fourth a little shorter than fifth, which has its base dull ochraceous; pronotum very coarsely punctate and slightly rugulose; scutellum coarsely punctate and somewhat transversely rugulose; corium thickly and more finely punctate; membrane with the apex paler and extending beyond apex of abdomen; rostrum extending to the penultimate abdominal segment.
Long. 12 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This species is allied to *D. piceus*, Palis.-Beauv., but differs by its less convex and more flattened upper surface, the different relative lengths of the second and third joints of the antennæ, &c.

PRIAPISMUS, gen. nov. (To follow the genus *Dinocoris*, p. 47.)

Allied to *Dinocoris*, but differing in not having the abdomen beneath provided with a distinct longitudinal furrow, and by the lateral margins of the pronotum being more or less convex and slightly recurved; scutellum with the apex rounded; membrane extending to, but not prominently passing, the apex of the abdomen.

I have been compelled to propose this genus for the reception of two species, both from the State of Panama. Besides the above differential characters, *Priapismus* differs from *Dinocoris* by the smaller size of its species.

1. **Priapismus foveatus**, n. sp. (Tab. XXXI. fig. 2.)

Castaneous, varying in hue; eyes paler; antennæ with the basal third of apical joint ochraceous. Antennæ with the first and second joints shortest and subequal in length, third and fourth longer, subequal in length, but shorter than the fifth. Pronotum with a somewhat indistinct transverse impression on disk, on each side of which is a foveate impression near each lateral margin; pronotum and scutellum some-

what coarsely punctate, the last with a small foveate spot at each basal angle; corium more thickly and finely punctate; rostrum about reaching the penultimate segment of the abdomen.

Long. 9 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

2. **Priapismus maculatus,** n. sp. (Tab. XXXI. fig. 3.)

Ochraceous, much suffused and mottled with black punctures, which are generally situate in confluent patches; pronotum with two black spots at lateral margins, one at posterior angle, the other near anterior angle; antennæ suffused with blackish, the bases of the fourth and fifth joints ochraceous; legs spotted with black; connexivum alternately black and ochraceous. Head with the lateral lobes coarsely punctate and finely rugulose, pronotum and scutellum sparingly but very coarsely punctate; corium somewhat more thickly and finely punctate; antennæ with the second joint about as long as or very slightly longer than the first, third and fourth joints longer and subequal in length, but shorter than the fifth.

Long. 7–9 millim.

Hab. PANAMA, Volcan de Chiriqui 4500 to 6000 feet, Bugaba (*Champion*).

In addition to the very different coloration, this species has the lateral margins of the pronotum rather more convex than in *P. foveatus*.

BOTERUS, gen. nov.

Head a little longer than broad; eyes moderately exserted, well separated from the anterior margin of the pronotum; lateral margins notched, or obscurely and obtusely spined in front of the eyes; the lateral lobes reflexed at the margins and united together considerably in front of the central lobe; antennæ with the first and second joints subequal in length. Pronotum about twice as broad at the base as long; lateral margins straight or slightly sinuate, and moderately reflexed; lateral angles rounded; anterior angles subacute. Corium with the lateral margins ampliated and convex, the membrane well developed. Scutellum extending a little beyond the anterior angle of the corium, somewhat broad, narrowed towards the apex, which is angularly rounded. Rostrum almost reaching the apex of the abdomen.

The length of the rostrum, the ampliated and convex margins of the corium, and the exserted eyes well separated from the anterior margin of the pronotum are the most distinguishing points of this genus.

1. **Boterus guatemalensis,** n. sp. (Tab. XXX. fig. 17.)

Dark ochraceous, shaded with piceous, coarsely and darkly punctate. Head almost piceous excepting at the lateral margins, antennæ brownish-ochraceous; pronotum considerably shaded with piceous; scutellum prominently piceous at the lateral margins and with two small piceous spots on the apical margin; corium much suffused with piceous, excepting at the extreme lateral margin, the membrane pitchy. Body beneath piceous; underside of the head, rostrum, and legs brownish-ochraceous or dull castaneous; legs spotted with piceous. Antennæ with the first and second joints subequal in length; third joint very slightly shorter than the fourth. Head somewhat thickly punctate, excepting at the lateral margins; pronotum, scutellum, and corium irregularly and coarsely punctate, the extreme lateral margins of the pronotum and the corium impunctate.

Long. 13 millim.

Hab. GUATEMALA, Capetillo (*Rodriguez*).

MATHIOLUS, gen. nov.

Body subovate, flattened. Head with the lateral lobes meeting in front of the central lobe, the margins slightly reflexed, obtusely and obscurely toothed on each side in front of the eyes. Pronotum much narrower in front than at base. Scutellum attenuated posteriorly. Membrane not quite reaching apex of abdomen in male, rudimentary and scarcely extending beyond the corium in the female. Rostrum about reaching the posterior coxæ. Antennæ five-jointed.

This genus is remarkable for the structural differences between the two sexes, a very unusual circumstance in the *Pentatomidæ*; the female also in the typical example is much larger in size than the male.

1. **Mathiolus generatus**, n. sp. (Tab. XXXI. figg. 4 ♂, 5 ♀.)

Dark castaneous and rugosely punctate above; legs and rostrum much paler in hue. Antennæ with the first and second joints shortest and subequal in length, third and fifth joints subequal in length, a little longer than the fourth joint.

Male with the membrane short, not quite covering the apex of abdomen, membranal inner margins straight and sometimes not quite meeting.

Female with the membrane rudimentary, only extending beyond the inner angle of the corium, and leaving the last three segments of the abdomen exposed.

Long. ♂ 8½ millim.; ♀ 10 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Four males and one female of this very interesting hemipteron were captured by Mr. Champion. The examples of the males are quite constant in size, and we may presume that the females are also invariably larger.

EMPICORIS (p. 48).

Empicoris ramosa (p. 49).

To the localities given, add:—MEXICO, Chilpancingo, Atoyac in Vera Cruz (*H. H. Smith*).

MACROPYGIUM (p. 49).

Macropygium reticulare (p. 49).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*H. H. Smith*), Cuesta de Misantla (*M. Trujillo*), Temax in North Yucatan (*Gaumer*); GUATEMALA, San Gerónimo, San Juan, Senahu (*Champion*).

OCHLERUS (p. 50).

Ochlerus marginatus (p. 50).

To the localities given, add:—PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

MELANODERMUS (p. 50).

Melanodermus tartareus (p. 51).

To the localities given, add:—PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

BROCHYMENA (p. 51).

Brochymena myops (p. 51).

To the localities given, add:—MEXICO, Tepic (*Schumann*), Chilpancingo, Acaguizotla, Mescala (*H. H. Smith*); GUATEMALA, San Gerónimo (*Champion*).

Brochymena quadripustulata (p. 51).

To the localities given, add.—MEXICO, Orizaba (*F. D. G. & H. H. Smith*).

Brochymena hædula (p. 52).

To the localities given, add:—MEXICO, San Luis Potosi (*Dr. Palmer*), Tepic (*Schumann*), Chilpancingo, Rincon, Atoyac in Vera Cruz, Orizaba (*H. H. Smith*); GUATEMALA, Tocoy in Vera Paz (*Champion*).

6. **Brochymena aculeata,** n. sp. (Tab. XXXI. fig. 6.)

Closely allied in appearance to *B. hædula*, Stål, but differing by having the lateral lobes of the head distinctly longer than the central lobe; the spine above the antenniferous tubercles distinctly longer and much more acute; the spines on the lateral margins of the pronotum much longer and more prominent; and in having the third joint of the antennæ much longer than the second joint. The antennæ are also uniformly dark fuscous and not annulated with ochraceous as in *B. hædula*.

Long. 13–14 millim.

Hab. MEXICO, Chilpancingo and Amula in Guerrero (*H. H. Smith*).

COSMOPEPLA (p. 52).

Cosmopepla decorata (p. 53).

To the localities given, add:—MEXICO, Xucumanatlan, Omilteme, Chilpancingo, and Amula in Guerrero (*H. H. Smith*), Orizaba (*F. D. G. & H. H. Smith*), Jalapa (*F. D. G. & M. Trujillo*).

1 (A). **Cosmopepla binotata,** n. sp. (Tab. XXXI. fig. 7.)

Dark indigo-blue; pronotum with the lateral margins and a broad transverse fascia near base—which extends in a subquadrate manner to the base at centre, and there contains two small dark spots,—pale ochraceous. Apical margins of scutellum and basal lateral margins of corium pale ochraceous. Abdomen beneath with the lateral margins broadly pale ochraceous, containing a segmental series of small dark rounded spots, and some small ochraceous spots at coxæ.

Long. 6–7 millim.

Hab. MEXICO, Ciudad in Durango (*Forrer*).

This species can be easily distinguished from *C. decorata*, Hahn, by the central prolongation of the transverse ochraceous fascia to pronotum marked by two dark spots, by the narrower pale apical margin to scutellum, the broad lateral margin to abdomen beneath marked with segmental spots, &c.

MORMIDEA (p. 53).

Mormidea collaris (p. 54).

To the localities given, add:—MEXICO, Presidio (*Forrer*), Venta de Pelegrino, Venta de Zopilote, Acaguizotla, Dos Arroyos, Omilteme, and Chilpancingo in Guerrero (*H. H. Smith*), Atoyac in Vera Cruz (*Schumann*), Jalapa (*F. D. G.*), Orizaba (*H. H. Smith & F. D. G.*); GUATEMALA, El Reposo (*Champion*).

Mormidea ypsilon (p. 54).

To the localities given, add:—MEXICO, Dos Arroyos and Tepetlapa in Guerrero (*H. H. Smith*), Atoyac in Vera Cruz (*Schumann*), Orizaba (*H. H. Smith & F. D. G.*), Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); GUATEMALA, Paraiso, Tamahu, Panzos, and Sinanja in Vera Paz (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet, David, Caldera (*Champion*).

Mormidea pictiventris (p. 55).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); PANAMA, Bugaba, Volcan de Chiriqui, 2500 to 4000 feet, Caldera, San Feliz, Tolé (*Champion*).

Mormidea notulata (p. 55).

To the localities given, add:—MEXICO, Cuernavaca, Chilpancingo, Omilteme, Amula, Xucumanatlan, and Xautipa in Guerrero (*H. H. Smith*); GUATEMALA, Cerro Zunil (*Champion*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Mormidea tetra (p. 56).

To the localities given, add:—MEXICO, Chilpancingo and Amula in Guerrero (*H. H. Smith*).

ŒBALUS (p. 56).

Œbalus pugnax (p. 56).

To the localities given, add:—MEXICO, Tepic (*Schumann*), Chilpancingo, Omilteme, Amula, Xucumanatlan, and Rincon in Guerrero (*H. H. Smith*).

SIBARIA (p. 57).

Sibaria armata (p. 57).

To the localities given, add :—MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Teleman and Chacoj in Vera Paz (*Champion*); PANAMA, Bugaba, David, Volcan de Chiriqui 2000 to 3000 feet, Caldera (*Champion*).

AGRŒCUS. (To precede the genus *Euschistus*, p. 58.)

Agrœcus, Dallas, List Hem. i. pp. 193 & 199 (1851); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 528.

The broad scutellum, rounded at the apex, will alone distinguish this genus from *Euschistus*, to which it has considerable affinity. Two species have been previously recorded, both from the Neotropical Region.

1. **Agrœcus griseus.** (Tab. XXXI. fig. 8.)

Agrœcus griseus, Dall. List Hem. i. p. 199. 1, t. 7. f. 4[1]; Stål, En. Hem. ii. p. 23. 1[2].

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).—COLOMBIA[2]; BRITISH GUIANA[1]; BRAZIL[1 2].

The figure given by Dallas is in outline only, and although showing the generic characters for which it was intended, is insufficient for specific recognition.

EUSCHISTUS (p. 58).

Euschistus verrucifer (p. 58).

To the localities given, add:—GUATEMALA, Purula and Senahu in Vera Paz, Las Mercedes (*Champion*).

Euschistus tristigmus (p. 58).

To the localities given, add:—MEXICO, Ciudad, Ventanas, and Milpas in Durango (*Forrer*), Tepic (*Schumann*), Cuernavaca in Morelos, Chilpancingo, Omilteme, Xucumanatlan, Amula, and Tepetlapa, all in Guerrero, Vera Cruz, Teapa and Frontera in Tabasco (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*), Jalapa (*F. D. G.*), Temax in North Yucatan (*Gaumer*); GUATEMALA, Cerro Zunil, Senahu in Vera Paz (*Champion*).

Euschistus rugifer (p. 59).

To the locality given, add:—MEXICO, Presidio (*Forrer*), Tepic (*Schumann*), Teapa in Tabasco (*H. H. Smith*).

Euschistus bifibulus (p. 59).

To the localities given, add:—MEXICO, Teapa in Tabasco, Atoyac in Vera Cruz (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, Capetillo (*Champion*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Euschistus crenator (p. 59).

To the localities given, add:—MEXICO, Presidio (*Forrer*), Rincon in Guerrero, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); GUATEMALA, San Gerónimo (*Champion*); HONDURAS, Ruatan Isl. (*Gaumer*); PANAMA, Bugaba, David, Volcan de Chiriqui 2500 to 4000 feet, Caldera (*Champion*).

Euschistus spurculus (p. 59).

In his "Enumeratio Hemipterorum," but not in his original description (Stett. ent. Zeit. xxiii. p. 100. 58), Stål described the antennæ of this species as having the last two joints "nigris, basi pallidis." This, however, is scarcely a constant character in the large number of Mexican examples now before me, though more observable in the Guatemalan specimen here figured (Tab. VI. fig. 10).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*), Temax in North Yucatan (*Gaumer*).

Euschistus comptus (p. 60).

To the localities given, add:—MEXICO, Cuernavaca in Morelos, Chilpancingo in Guerrero (*H. H. Smith*).

Euschistus strenuus (p. 60).

To the locality given, add:—MEXICO, Venta de Zopilote in Guerrero (*H. H. Smith*); GUATEMALA, Champerico (*Champion*).

9 (A). **Euschistus zopilotensis,** n. sp. (Tab. XXXI. fig. 9.)

Dull ochraceous, somewhat thickly covered with dark punctures; a more or less distinct transverse levigate fascia between the pronotal angles; apical margin of the scutellum levigate and ochraceous; connexivum alternately ochraceous and black; body beneath and legs ochraceous, the legs thickly and finely spotted with black; antennæ ochraceous or reddish.

In structure and shape allied to *E. strenuus*, Stål, but with the pronotal angles subprominent and obtusely rounded, not prominent and subacute; the lateral margins of the pronotum are not levigate as in Stål's species, and the colour is also different.

Long. 9 millim.

Hab. MEXICO, Venta de Zopilote and Chilpancingo in Guerrero, Cuernavaca in Morelos (*H. H. Smith*).

This insect is very variable in coloration above, as in some specimens the punctures become confluent and form irregular spots and patches of black shading.

Euschistus biformis (p. 60).

To the localities given, add :—PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

10 (A). **Euschistus capitatus,** n. sp. (Tab. XXXI. fig. 10.)

Dark castaneous, almost black; underside of body and legs very pale castaneous, the latter thickly and finely spotted with black; connexivum alternately ochraceous and black; eyes dull ochraceous. Head thickly and coarsely punctate, with the lateral lobes distinctly longer than the central lobe, and with their apices obtusely acute. Antennæ with the second joint a little longer than the third, and almost equal in length to the fourth joint (fifth joint mutilated). Pronotum with the lateral angles slightly prominent and very obtusely acute, the anterior lateral margins distinctly serrated, the surface thickly and coarsely punctate. Scutellum and corium very thickly punctate.

Long. 12 millim., lat. pronot. angl. $7\frac{1}{2}$ millim.

Hab. MEXICO, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

The large size of this species and the structure of the head render it of easy recognition. It is allied to the North-American *E. fissilis*, Uhler.

10 (B). **Euschistus teapensis,** n. sp. (Tab. XXXI. fig. 11.)

Body above purplish-black; eyes castaneous; connexivum alternately black and yellow; antennæ ochraceous, apices of the first and second joints, apical halves of the third and fifth joints, and the whole of fourth joint excluding base, blackish. Body beneath and legs ochraceous; apex of rostrum, some central spots to sternum, a spot at base and another near apex of abdomen, apices of tibiæ and tarsi, an annulated spot near apices of posterior femora, and a number of small spots to legs, blackish, and a series of small blackish spots on extreme lateral margins of abdomen. Head coarsely punctate and with the central lobe slightly longer than the lateral lobes; antennæ with the second, third, and fifth joints subequal in length, the fourth joint the longest; pronotum and scutellum very coarsely punctate, pronotal angles prominent, obtusely acute, and very slightly notched behind near apices; corium thickly but finely punctate, especially on the costal area.

Long. 12 millim., lat. pronot. angl. $6\frac{1}{2}$ millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

This appears to be a well-marked but apparently scarce species, as only one specimen was sent to this country by Mr. Smith.

Euschistus integer (p. 60).

To the locality Mexico, add :—Pinos Altos in Chihuahua (*Buchan-Hepburn*).

DICHELOPS. (To follow the genus *Euschistus*, p. 60.)

Dichelops, Spinola, Ess. p. 299 (1837); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 527.
Zalega, Amyot et Serville, Hist. des Hém. p. 139 (1843).
Diceræus, Dallas, List Hem. i. p. 208 (1851).

Dichelops is closely allied to *Euschistus*, but differs in having the lateral lobes of the head much longer than the central lobe and spinously produced.

The genus is a purely Neotropical one, and six species have been previously enumerated. Another species, captured on the Volcan de Chiriqui in Panama by Mr. Champion, is here added.

1. **Dichelops bicolor,** n. sp. (Tab. XXXI. fig. 12.)

Body above purplish-brown; apices of pronotal angles infuscated; connexivum ochraceous; antennæ reddish, with the apical joint fuscous, its base luteous. Body beneath ochraceous, thickly covered with fuscous punctures, the lateral margins of the abdomen broadly ochraceous; legs reddish, finely spotted with fuscous. Head coarsely punctate; antennæ with the second and third joints subequal in length, fourth and fifth joints longest, and also subequal in length. Pronotum and scutellum coarsely punctate; pronotal angles prominent, curved anteriorly, and subacute and slightly notched behind. Corium thickly and finely punctate.

Long. $10\frac{1}{2}$–$11\frac{1}{2}$ millim., lat. pronot. angl. 7 millim.

Hab. PANAMA, Volcan de Chiriqui, 2000 to 3000 feet (*Champion*).

This species is allied in coloration above to *D. leucostigma*, Dall., but differs by the much less produced and more obtuse pronotal angles, the less produced lateral lobes of the head, pale margins to the abdomen beneath, &c.

PADÆUS (p. 61).

Padæus irroratus (p. 61).

To the localities given, add :—MEXICO, Cuernavaca in Morelos, Omilteme, Amula, Xautipa, Xucumanatlan, and Rincon in Guerrero (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*).

Padæus trivittatus (p. 62).

To the localities given, add :—MEXICO, Cuernavaca in Morelos, Omilteme, Amula, and Venta de Zopilote in Guerrero (*H. H. Smith*).

PROXYS (p. 62).

Proxys victor (p. 62).

To the localities given, add :—MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Chiacam (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Proxys punctulatus (p. 63).

To the localities given, add :—MEXICO, Milpas in Durango (*Forrer*), Cuernavaca in Morelos, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); COSTA RICA (*Van Patten*); BRITISH HONDURAS, R. Hondo (*Blancaneaux*).

CHLOROCHROA (p. 63).

1 (A). **Chlorochroa montivaga,** n. sp. (Tab. XXXI. fig. 13.)

Bright olivaceous-green above, the scutellum darker in hue; margins of the head, lateral margins of the pronotum, basal lateral margins of the corium, and the connexivum pale sanguineous; antennæ dark fuscous; eyes ochraceous; connexivum spotted with olivaceous at the segmental incisures. Body beneath pale olivaceous, the disk of the abdomen more or less shaded with ochraceous; margins of head, sternum, and base of corium pale sanguineous as above, connexivum beneath as above, coxæ and extreme bases of tibiæ pale sanguineous; legs olivaceous. Antennæ with the second and third joints subequal in length, a little shorter than the fourth and fifth joints, which are also subequal in length or the fourth a little shorter than the fifth; head, pronotum, and scutellum very coarsely punctate and rugulose, corium thickly but more finely punctate.

Long. 14 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

Only one specimen of this interesting species was sent home by Mr. Champion. It is allied to *C. ligata* (Say), from which it is at once distinguished by the different coloration, sanguineous margins to the head, concolorous apex of the scutellum, different relative lengths of the antennal joints, &c.

TRICHOPEPLA (p. 64).

2. **Trichopepla dubia,** n. sp. (Tab. XXXI. fig. 14.)

Dull ochraceous, thickly and finely punctate, the corium and base of pronotum shaded with purplish-brown; scutellum with a series of small spots on basal margin, two small spots on disk, and the lateral margins purplish-brown, apex narrowly pale ochraceous and levigate; membrane pale fuscous; connexivum luteous, with purplish spots at the segmental incisures. Body beneath pale luteous; abdomen with some very small marginal fuscous spots at segmental incisures, a series of small stigmatal spots and a narrow fascia on each lateral area also pale fuscous; legs ochraceous, mottled with small brownish spots. Rostrum reaching the posterior coxæ, with the apex pitchy. Antennæ with the first, second, and third joints ochraceous, the fourth and fifth joints pale reddish, the second and third joints subequal in length or the second slightly shorter than the third, fourth and fifth joints the longest and more robust and also subequal in length; pronotum with the lateral margins rounded and inwardly more or less foveate.

Long. 10–11 millim.

Hab. MEXICO, Ventanas (*Forrer*), Cuernavaca in Morelos, Tepetlapa in Guerrero (*H. H. Smith*).

This species is somewhat dissimilar in facies to the other members of the genus, but agrees in general structural characters, save in the less anteriorly attenuated head. I have, however, refrained, especially in this portion of the subfamily, from making further generic subdivision.

THYANTA (p. 65).

Thyanta perditor (p. 66).

To the localities given, add:—MEXICO, Milpas in Durango, Presidio (*Forrer*), Venta de Zopilote, Amula, and Tepetlapa, in Guerrero, Cuernavaca in Morelos, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*).

Thyanta tæniola (p. 66).

To the localities given, add:—MEXICO, Presidio (*Forrer*), Temax in North Yucatan (*Gaumer*); GUATEMALA, Panzos, Teleman, Capetillo (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

4. **Thyanta maculata.** (Tab. XXX. fig. 21.)

Cimex maculatus, Fabr. Syst. Ent. p. 704. 40; Goeze, E. B. ii. p. 238. 9; Fabr. Spec. ii. p. 347. 56; Mant. Ins. ii. p. 285. 65; Gmel. S. N. i. 4, p. 2140. 210; Fabr. E. S. iv. p. 100. 82; Syst. Rhynch. p. 161. 31.

Thyanta maculata, Stål, Hem. Fabr. i. p. 29. 2; En. Hem. ii. p. 35. 8.

Hab. MEXICO, Tres Marias Is. (*Forrer*); GUATEMALA, San Gerónimo and Panzos in Vera Paz (*Champion*).

This appears to be the first time that this insect has been properly localized, "America" being the only habitat previously given. It is probably a scarce species, as we possess only one specimen from each of the above-mentioned localities.

CHLOROCORIS (p. 67).

Chlorocoris atrispinus (p. 67).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Jalapa (*Höge*); PANAMA, Bugaba, David, Caldera (*Champion*).

Chlorocoris rufispinus (p. 68).

To the localities given, add:—MEXICO, Tepic (*Schumann*).

Chlorocoris rubescens (p. 68) (part.).

I was formerly of the opinion that the *C. rufopictus*, Walk., was synonymous with the same author's *C. rubescens*; but with additional specimens collected in Mexico by Mr. H. H. Smith (Walker's solitary type-specimens being the only ones previously known), I find that the pronotal differences are constant, and that the two forms must be treated as distinct species. In fresh specimens the colour is also green and not ochraceous. The true *C. rubescens* is properly figured (Tab. VI. fig. 20).

To the localities given, add:—MEXICO, Omilteme in Guerrero (*H. H. Smith*), Jalapa (*Höge*).

4 (A). **Chlorocoris rufopictus.** (Tab. XXXI. fig. 15.)

Chlorocoris rufopictus, Walk. Cat. Het. iii. p. 544[1].

Chlorocoris rubescens (part.), huj. op. anteà p. 68.

Hab. MEXICO[1], Omilteme and Xucumanatlan in Guerrero (*H. H. Smith*).

Chlorocoris subrugosus (p. 68).

To the localities given, add:—MEXICO, Cuesta de Misantla (*M. Trujillo*).

Chlorocoris championi (p. 69).

To the localities given, add:—GUATEMALA, Cerro Zunil (*Champion*).

Since writing the description of this species, we have received a good series of specimens from Mr. Champion, which show that it is of a protean character so far as colour is concerned, and two varieties, in addition to the typical form described and figured, may be enumerated.

Var. *a*. The green ground-colour much broken up and mottled with ochraceous.

Hab. GUATEMALA, Panima and Sabo in Vera Paz, Cerro Zunil (*Champion*).

Var. *b*. Ground-colour uniform brownish-ochraceous, not green.

Hab. GUATEMALA, San Gerónimo, Cerro Zunil, Sabo in Vera Paz (*Champion*).

Chlorocoris irroratus (p. 69).

To the locality Mexico, add:—Orizaba (*H. H. Smith & F. D. G.*).

One specimen only of this species is contained in our collection.

9. **Chlorocoris usitatus,** n. sp. (Tab. XXX. fig. 20.)

Ochraceous, apical area of the corium and the membrane pale greenish; body beneath and legs ochraceous. Antennæ reddish-ochraceous, extreme apices of the joints fuscous, second and third joints subequal in length, a little shorter than the fourth (fifth joint mutilated); eyes fuscous; head and anterior portion of pronotum much depressed anteriorly; pronotum very coarsely punctate and rugulose, the lateral margins finely serrated and narrowly reddish, the lateral angles moderately produced and obtusely acute; corium coarsely punctate, a small levigate purplish spot on disk, and the base of lateral margin narrowly reddish; scutellum coarsely punctate and rugulose; connexivum greenish, its outer margin narrowly reddish, and with a series of small fuscous spots at the segmental incisures.

Long. 16–17 millim., lat. pronot. angl. 10 millim.

Hab. GUATEMALA, Mirandilla, Volcan de Agua 8500 to 10,500 feet (*Champion*).

Mr. Champion, who captured these specimens, and has since seen them in our collection, informs us that they are, in a fresh condition, green, and that the ochraceous hue is due to discoloration. This caution should, no doubt, be extended to other species of the genus, which are necessarily described from cabinet and dried specimens.

10. **Chlorocoris hebetatus.** (Tab. XXXI. fig. 16.)

Pale green, margins of the head, lateral margins of the pronotum, and base of lateral margins of corium narrowly luteous; eyes brownish-ochraceous; a central narrow longitudinal levigate line extending along the pronotum and scutellum, and becoming luteous posteriorly. Body beneath and legs greenish-ochraceous. Antennæ reddish (the fourth and fifth joints mutilated). The head is somewhat coarsely and sparsely punctate; the second joint of the antennæ is slightly shorter than the third; the pronotum is coarsely punctate and rugulose posteriorly, the lateral margins are finely serrate, and the lateral angles are obtusely prominent; the scutellum is coarsely punctate and rugulose; the corium is thickly but more finely punctate. Membrane pale greenish.

Long. 15 millim., lat. pronot. angl. 9 millim.

Hab. MEXICO, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

Only one specimen of this species has reached us; but the obtuse angles of the pronotum give it a very distinct appearance.

LOXA (p. 70).

Loxa flavicollis (p. 70).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); PANAMA, Bugaba (*Champion*).

Loxa affinis (p. 70).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*); PANAMA, Bugaba (*Champion*).

MURGANTIA (p. 71).

Murgantia munda (p. 71).

To the localities given, add:—MEXICO, Tepic (*Schumann*).

Murgantia histrionica (p. 71).

To the localities given, add:—MEXICO, Orizaba (*H. H. Smith & F. D. G.*), Amula in Guerrero (*H. H. Smith*).

AROCERA (p. 72).

Arocera apta (p. 73).

To the localities given, add:—PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

3 (A). **Arocera schumanni,** n. sp. (Tab. XXXI. fig. 17.)

Closely allied in general appearance to *A. apta*, Walk., but differing by the relative lengths of the joints of the antennæ—the third joint in *A. schumanni* is about one third longer than the second, but in *A. apta* it is more than twice as long; the antennæ in the last-named species are also much more slender than in the insect here described. The following colour-differences are also observable:—the transverse black fascia to the corium is always sinuately notched on its posterior margin; the black lateral sternal spots in *A. apta* are absent in *A. schumanni*; and in the last-named species the apices of the femora are less broadly black, but the rostrum is almost wholly black, excepting at base.

Long. 12–15 millim.

Hab. MEXICO, Tepic (*Schumann*).

Arocera protea (p. 73).

To the locality given, add:—MEXICO (*Höge*).

Arocera affinis (p. 74).

To the localities given, add:—MEXICO, Jalapa (*Höge*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

5 (A). **Arocera altivola,** n. sp. (Tab. XXXI. fig. 18.)

Allied to *A. affinis,* Dist., but with different surface-markings, which consist of small black rounded spots, situate two on disk of pronotum, one at each basal angle of the scutellum, two before the apex of scutellum, which is also black, and one on the disk of each corium; a large black spot on the margin of the corium, parallel with the smaller discal spot. This species also differs by having the lateral lobes of the head distinctly longer than the central lobe.

Long. 12 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 feet (*Champion*).

A single specimen was taken by Mr. Champion.

5 (B). **Arocera chiriquensis,** n. sp. (Tab. XXX. fig. 19.)

Reddish-ochraceous; margins and base of head, antennæ, and eyes black; pronotum with the anterior and lateral margins, a rounded spot at each posterior lateral angle, and two large discal spots resting on posterior margin more or less black; scutellum with two large spots at base and two large spots near apex more or less black; corium with irregular black markings; membrane black, the apex greyish-white. Body beneath reddish-ochraceous, sternal and abdominal segmental margins black; legs reddish, much suffused with black; rostrum pitchy. The body is somewhat short and broad; antennæ with the second joint slightly shorter than the third, which is also a little shorter than the fourth, fourth and fifth almost subequal in length, or the fourth a little longer than the fifth.

Long. 10 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

6 (A). **Arocera jalapensis,** n. sp. (Tab. XXX. fig. 18.)

Prasinous; base of head, eyes, antennæ, three discal spots and two near anterior margin of pronotum, two large spots at base of scutellum and two contiguous, near apex of same, a broad irregular transverse fascia to corium, and the membrane (excluding apex) black. Body beneath ochraceous; rostrum, legs, sternum, a double series of spots on lateral margins, and a central series of transverse spots to abdomen, black. (Antennæ mutilated.)

Long. 12 millim.

Hab. MEXICO, Jalapa (*M. Trujillo*).

Allied to *A. patibulata*, Dist., from Costa Rica, and possibly a varietal form of that species; but the colour-markings are very distinct, and the difficulties in the study of the genus would not be lessened by placing these insects under one name, at least without more specimens and some connecting links. The antennæ might give differential characters, but unfortunately are mutilated in the specimen described.

Arocera splendens (p. 74).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Volcan de Atitlan 2500 to 3500 feet, Pantaleon (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

This species varies greatly in size, the specimens now before me averaging from 14 to 21 millim. in length.

Arocera rufo-notata (p. 75).

To the locality given, add:—MEXICO, Cuesta de Misantla (*M. Trujillo*), Dos Arroyos in Guerrero (*H. H. Smith*); GUATEMALA, Cerro Zunil (*Champion*).

BOEA. (To follow the genus *Arocera*, p. 75.)

Boea, Walker, Cat. Het. ii. p. 405 (1867).

The very prominent eyes will alone serve to distinguish this genus from *Arocera*. *Boea* is a Neotropical genus, and Walker has described three species, all from the Amazonian subregion.

1. **Boea costaricensis,** n. sp. (Tab. XXX. fig. 23.)

Pale, shining sanguineous; the head, two large transverse discal fasciæ to pronotum (connected outwardly), two very large and contiguous discal spots to scutellum, and a small spot near apex of same, a narrow claval streak, a large spot at inner apical angle of corium, and the base of membrane, shining indigo-blue. Body beneath and legs pale sanguineous; lateral margins of head and some discal sternal spots indigo-blue. Antennæ with the first and second joints reddish-ochraceous (remainder mutilated), the second joint very long. Body above finely but sparingly punctate, the scutellum (excluding base) somewhat thickly punctate.

Long. 12 millim.

Hab. COSTA RICA (*Van Patten*).

One specimen only of this beautiful species is in our collection.

PHARYPIA (p. 76).

Pharypia pulchella (p. 76).

To the localities given, add:—COSTA RICA (*Van Patten*); PANAMA, Caldera, David (*Champion*).

Pharypia nitidiventris (p. 77).

To the localities given, add:—MEXICO, Jalapa (*F. D. Godman*); PANAMA, David (*Champion*).

NEZARA (p. 77).

Nezara stictica (p. 77).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann*), Temax in North Yucatan (*Gaumer*); PANAMA, Bugaba, Caldera (*Champion*).

Since recording this species previously, a larger series has been received from Mr. Champion, which exhibits a remarkable contrast in the size of the specimens. The largest example measures 18 millim. in length, whilst the smallest is only 11 millim. in its longitudinal dimension.

1 (A). **Nezara candens,** n. sp. (Tab. XXXI. fig. 19.)

Allied to *N. stictica*, Dall., but differing by its paler and redder coloration, by the body being much more narrowed posteriorly, by the scutellum being distinctly depressed and foveate on the disk, and by the slightly longer rostrum which almost reaches the posterior margin of the basal abdominal segment.

Long. 15 millim.

Hab. MEXICO (*Höge*).

We have received one specimen from Herr Höge, but with no more precise locality than the above.

1 (B). **Nezara panamensis,** n. sp. (Tab. XXXII. fig. 1.)

Body and legs ochraceous; antennæ, eyes, apex of corium, membrane, apices of the femora, tibiæ, tarsi, and rostrum (excluding base) black. Second joint of the antennæ short, third, fourth, and fifth joints subequal in length; ventral spine short, and terminating between the posterior coxæ.

Long. 13 millim.

Hab. PANAMA, Bugaba (*Champion*).

One specimen only of this aberrantly-coloured species was obtained by Mr. Champion; like *N. stictica* and *N. candens*, it is in strong contrast to the usual specific facies of the genus.

Nezara marginata (p. 79).

To the localities given, add:—MEXICO, Ventanas in Durango (*Forrer*), Atoyac in Vera Cruz and Tepic (*Schumann*), Chilpancingo and Tepetlapa in Guerrero, Cuernavaca in Morelos, Teapa in Tabasco (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*), Temax in North Yucatan (*Gaumer*); GUATEMALA, San Gerónimo (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet, David, Taboga Island (*Champion*).

5. **Nezara majuscula,** n. sp. (Tab. XXXI. fig. 20.)

Green; margins of head, lateral margins of pronotum, basal lateral margins to corium, connexivum, and bases of the tibiæ sanguineous. Connexivum spotted with black at the incisures. Antennæ very dark olivaceous-green. Antennæ with the second joint shorter than the third; third, fourth, and fifth joints about subequal in length. Body above very finely and thickly punctate and finely rugulose.

Long. 17 millim.

Hab. MEXICO, Xautipa in Guerrero (*H. H. Smith*); PANAMA (*Boucard, coll. Dist.*).

One specimen from each of the above localities is now before me. *N. majuscula* is distinguished from *N. marginata*, Palis. Beauv., by its much larger size, by the broader and darker lateral margins, and by the shorter abdominal basal spine.

6. **Nezara scutellata,** n. sp. (Tab. XXXI. fig. 21.)

Green; margins of head, lateral margin of pronotum, basal lateral margins of corium, connexivum, apex of scutellum, and extreme apices of femora reddish-ochraceous; connexivum spotted with black at the incisures. Antennæ very dark olivaceous-green; membrane pale greyish with a greenish tinge. The body above is thickly and somewhat coarsely punctate, the disk of the pronotum being slightly rugulose; the

antennæ have the fourth joint slightly the longest, the second shorter than the third, the third and fifth joints subequal in length; basal abdominal spine somewhat long, extending just beyond the posterior coxæ.

Long. 18 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

One specimen only of this very distinct species was taken by Mr. Champion.

BANASA (p. 79).

Banasa varians (p. 80).

To the localities given, add:—MEXICO, Tepic (*Schumann*), Jalapa (*F. D. Godman*), Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Cerro Zunil (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet, David, Caldera (*Champion*), San Miguel in the Pearl Islands (*Champion*).

Banasa imbuta (p. 80).

To the localities given, add:—PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

5. **Banasa stigmosa,** n. sp. (Tab. XXX. fig. 24.)

Pale shining luteous, sparingly and irregularly punctate; three punctate spots at base of head, a series of irregular patches on basal third of pronotum, two large contiguous spots near apex of scutellum, and the corium pale purplish-brown; apex of scutellum pale greyish and levigate; membrane greyish-brown, the apex pale greyish; antennæ luteous, the apex of the third and the whole of fourth and fifth joints (excluding base of fifth) purplish-brown. Body beneath and legs luteous. The pronotum has a few scattered punctures on disk, and is sparingly but coarsely punctate on basal third; the scutellum has some scattered punctures on disk, a marginal series of coarse punctures (not extending to apex), and the area of the brown spots also coarsely punctate; the corium is more thickly and finely punctate. The antennæ have the second joint much shorter than the third, the third and fourth joints subequal in length and much longer than the fifth.

Long. 8 millim.

Hab. PANAMA, Matachin (*coll. Dist.*).

PALLANTIA. (To follow the genus *Banasa*, p. 80.)

Pallantia, Stål, Stett. ent. Zeit. xxiii. p. 106 (1862).

"Banasæ affine genus, forma capitis tibiisque sulcatis differt." These remarks of Stål sufficiently differentiate this genus from *Banasa*, to which it is allied. Only one species is at present known to entomology, and is found in our fauna.

1. **Pallantia macula.** (Tab. XXX. fig. 22.)

Rhaphigaster macula, Dall. List Hem. i. p. 284. 32 [1].

Banasa discifera, Stål, Rio Hem. i. p. 24. 2 [2]; En. Hem. ii. p. 44. 1 [3].

Hab. MEXICO [3], GUATEMALA, San Gerónimo (*Champion*).—BRAZIL, Rio Janeiro [2].

The locality of the type-specimen described by Dallas [1] was unknown.

PIEZODORUS (p. 81).

Piezodorus guildingi (p. 81).

To the localities given, add:—MEXICO, Presidio (*Forrer*); PANAMA, Bugaba, Caldera (*Champion*).

2. **Piezodorus tinctus,** n. sp. (Tab. XXXI. fig. 22.)

Ochraceous; base of pronotum, a series of basal spots to scutellum, and a small spot on each side near apex, base of corium, claval spots, and a small spot on disk, dark purplish-brown; margins of head and lateral margins of pronotum narrowly and indistinctly sanguineous; antennæ purplish-brown, base of last joint paler in hue; connexivum with the outer margin narrowly sanguineous and minutely spotted with black at the incisures. Body beneath and legs ochraceous, apices of femora and bases of tibiæ pale sanguineous, tarsi brownish. Body above somewhat thickly and finely punctate; antennæ with the second joint very short, the third and fourth joints subequal in length, a little longer than fifth.

Long. 8–10 millim.

Hab. PANAMA, Boquete (*Champion*).—ANTILLES (*coll. Dist.*).

A single specimen collected by Mr. Champion in Chiriqui, and one from the Antilles in my own collection are all that are known of this species; the Antillean example is the smaller in size.

TAUROCERUS (p. 81).

Taurocerus edessoides (p. 82).

To the localities given, add:—GUATEMALA, Panima in Vera Paz (*Champion*); PANAMA, Bugaba (*Champion*).

ARVELIUS (p. 82).

Arvelius albo-punctatus (p. 82).

To the localities given, add:—MEXICO, Milpas in Durango and Presidio (*Forrer*), Tepic (*Schumann*), Cuernavaca in Morelos, Atoyac in Vera Cruz (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*), Temax in North Yucatan (*Gaumer*).

PHALŒCUS (p. 83).

Phalœcus decoratus (p. 83).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*), Atoyac in Vera Cruz (*Schumann & H. H. Smith*).

BRACHYSTETHUS (p. 84).

Brachystethus vicinus (p. 85).

To the localities given, add:—COSTA RICA, R. Sucio (*Rogers*); PANAMA, Bugaba (*Champion*).

Brachystethus rubro-maculatus (p. 85).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*H. H. Smith & Schumann*), Cuesta de Misantla (*M. Trujillo*), Teapa in Tabasco (*H. H. Smith*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet, David (*Champion*).

3. **Brachystethus parvus,** n. sp. (Tab. XXXI. fig. 23.)

Dark brownish-ochraceous, very thickly and coarsely punctate; antennæ, margins of head, lateral margins of pronotum, basal lateral margins of corium, and underside of body and legs, ochraceous; a levigate luteous spot at each basal angle of scutellum; connexivum alternately ochraceous and purplish; underside of body and femora with brown punctures. Antennæ with the second joint shorter than the third, the fourth and fifth joints longest, the apex of fourth joint and base of fifth luteous.

Long. 12 millim.

Hab. PANAMA, David (*Champion*).

This is the smallest species of the genus with which I am acquainted.

PEROMATUS (p. 85).

Peromatus notatus (p. 85).

To the localities given, add:—PANAMA, Bugaba, Tolé (*Champion*).

Peromatus truncatus (p. 86).

To the locality given, add:—PANAMA, Bugaba (*Champion*), Panama city (*J. J. Walker*).

The specimens received from the State of Panama are larger than the Mexican type and some have a length of 25 millim.

EDESSA (p. 86).

This genus, which was previously shown to be the largest in the whole Pentatominæ, has again received an extraordinary augmentation, owing to the large amount of additional material obtained since I previously enumerated its Central-American representatives.

Panama appears to be wonderfully rich in species of *Edessa*, which may be taken as the most peculiar and representative Neotropical genus of the whole Rhynchota.

1 (A). **Edessa tauriformis.** (Tab. XXX. fig. 25.)

Edessa tauriformis, Dist. Trans. Ent. Soc. 1881, p. 391 [1].

Hab. NICARAGUA, Chontales [1] (*coll. Dist.*); PANAMA, Bugaba (*Champion*).

Edessa costalis (p. 87).

To the localities given, add:—PANAMA, San Feliz (*Champion*).

Edessa taurina (p. 88).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann*).

4 (A). **Edessa intorta,** n. sp. (Tab. XXXII. fig. 2.)

Body above brownish-ochraceous. Pronotum very coarsely punctate, the lateral angles very strongly produced and slightly recurved at apices, which are paler in hue. Scutellum sparingly and coarsely punctate, with a broad double series of finer, but thickly arranged punctures on its apical area, its apex not reaching the level of the apex of corium. Corium very thickly and finely punctate, with the veins ochraceous. Membrane cupreous, with its apex much paler in hue. Body beneath pale ochraceous; the sternal sutures, the abdominal sutures (excluding disk), and some short transverse stigmatal fasciæ, black. Legs ochraceous, the tarsi pale castaneous. The antennæ have the second joint a little shorter than the third, the fourth and fifth joints longest and subequal in length. The apical angles of the sixth abdominal segment are acutely produced.

Long. 15 millim., lat. pronot. angl. 13 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

One specimen only of this species was sent home by Mr. Champion.

Edessa jugata (p. 88).

To the localities given, add:—MEXICO, Misantla (*F. D. G.*), Atoyac in Vera Cruz (*Schumann*), Teapa in Tabasco (*H. H. Smith*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet, and Bugaba (*Champion*).

5 (A). **Edessa pictiventris.** (Tab. XXXII. fig. 3.)

Edessa pictiventris, Stål, En. Hem. ii. p. 52. 13 [1].

Hab. PANAMA, Boucard (*coll. Dist.*), Bugaba, Volcan de Chiriqui 2000 to 3000 feet, David, and Caldera (*Champion*).—COLOMBIA, Bogota [1].

This certainly appears to be one of the most abundant species of the genus in the State of Panama; and it varies in size, our largest specimens being 17 millim. in length, thus agreeing with the dimensions given by Stål, whilst the smallest are only 14 millim.

5 (B). **Edessa bulbacea,** n. sp. (Tab XXXII. fig. 4.)

Dark castaneous; lateral angles of the pronotum produced into somewhat long nodulate spines with their apices black. Head punctate, more thickly so on the apical half; antennæ pale castaneous, the second and third joints subequal in length, the fourth and fifth joints longest and also subequal. Pronotum thickly and somewhat coarsely punctate, with a patch of closely-arranged black punctures on the anterior lateral margin. Scutellum thickly and coarsely punctate, its apex acutely angulated, but not reaching the level of the apex of corium. Corium very thickly and finely punctate, with the veins pale castaneous. Membrane dark cupreous. Body beneath very dark castaneous; the legs, coxæ, sternal plate, transverse fasciæ to sternum, a double series of central abdominal spots, stigmatal spots, and an almost connected series of long marginal abdominal spots, pale castaneous. Apices of sixth abdominal segment acute and moderately produced.

Long. 22 millim., lat. pronot. angl. 17 millim.

Hab. PANAMA, Bugaba (*Champion*).

Edessa olivacea (p. 88).

To the localities given, add:—GUATEMALA, Zapote (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet, Tolé (*Champion*).

Edessa nigricornis (p. 88).

To the locality given, add:—GUATEMALA, Mirandilla (*Champion*); PANAMA, Bugaba (*Champion*).

8 (A). **Edessa gentilitia,** n. sp. (Tab. XXXII. fig. 5.)

Olivaceous: pronotum with the lateral angles slightly produced, thickened, convexly rounded, somewhat recurved, and black. Antennæ pale ochraceous, the second joint shorter than the third, the fourth almost as long as second and third joints together (the fifth mutilated). Pronotum coarsely punctate. Scutellum coarsely punctate, its apex darker, narrowly margined with pale olivaceous, subacute, but not reaching the level of the apex of corium, the apical area somewhat longitudinally furrowed. Corium thickly and finely punctate, with the veins pale olivaceous. Membrane dark cupreous. Body beneath ochraceous; metasternum olivaceous, with an ochraceous spot near each lateral margin; segmental incisures margined with olivaceous; legs pale castaneous. Sixth abdominal segment with its apical angles acutely but moderately produced.

Long. 17 millim., lat. pronot. angl. $10\frac{1}{2}$ millim.

Hab. MEXICO, Venta de Pelegrino in Guerrero (*H. H. Smith*).

Edessa leucogramma (p. 89).

To the localities given, add:—PANAMA, Bugaba (*Champion*).

11 (A). **Edessa tribuaria,** n. sp. (Tab. XXXII. fig. 6.)

Closely allied to *E. leucogramma*, Perty, but somewhat smaller, the produced lateral pronotal angles with their apices somewhat laminately flattened, the apex of the scutellum broader, the venation of the corium different and more reticulated.

Long. 17–18 millim., lat. pronot. angl. 13–14 millim.

Hab. MEXICO, Temax in N. Yucatan (*Gaumer*).

A fair series of this species was collected by Mr. Gaumer, and it evidently takes the place in Yucatan of the more southern *E. leucogramma*.

11 (B). **Edessa bugabensis,** n. sp. (Tab. XXXII. fig. 7.)

Olivaceous, thickly punctured with black. Head with a series of longitudinal black punctures; eyes fuscous; antennæ pale ochraceous, with a subapical black annulation; second joint longer than the third, which is short, the fourth about as long as second and third together, and subequal in length to the fifth. Pronotum rugulose and covered with coarse black punctures, with two transverse ridges near anterior margin, the lateral angles produced into moderately long, strong, obtusely pointed spines with their apices black. Scutellum covered with coarse black punctures, its apex subacute, but not reaching the level of the apex of corium. Corium thickly and finely punctate, the venation ochraceous. Membrane dark cupreous. Body beneath ochraceous, somewhat thickly covered with black punctures, excepting the central disk of abdomen, which is levigate; meso- and metasternum with a large purplish patch on each side; legs ochraceous.

Long. 21 millim., lat. pronot. angl. 16 millim.

Hab. PANAMA, Bugaba (*Champion*).

This species is also allied to *E. leucogramma*, Perty. Mr. Champion sent us home two specimens.

Edessa salvini (p. 89).

To the localities given, add :—GUATEMALA, Cerro Zunil (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

12 (A). **Edessa projecta,** n. sp. (Tab. XXXII. fig. 8.)

Pale castaneous or brownish-ochraceous. Pronotum with the lateral angles produced into moderately long, straight, black spines, the apices of which are very slightly recurved. Pronotum and scutellum coarsely punctate; the corium thickly and finely punctate. Scutellum with the apex subacute, not reaching the apex of the corium. Membrane dark cupreous. Body beneath and legs concolorous with the above, but with a double discal central series of obscure ochraceous spots to the abdomen; abdominal spines with the apices black. Antennæ dark ochraceous, second joint much longer than the third, fourth and fifth joints longest and subequal in length.

Long. 11–13 millim., lat. pronot. angl. 9–10 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

12 (B). **Edessa pennata,** n. sp. (Tab. XXXII. fig. 9.)

Pale olivaceous-green; lateral margins of the head and pronotum narrowly ochraceous. Antennæ reddish-ochraceous, second and third joints subequal in length, or second a little shorter than the third, fourth joint a little longer than the second and third joints together (fifth mutilated). Pronotum rugulose and coarsely punctate, the lateral angles produced into moderately long and somewhat recurved spines, their apices black. Scutellum rugulose and coarsely punctate, its apex subacute, but not reaching the apex of the corium. Corium thickly and finely punctate. Membrane dark cupreous. Body beneath and legs reddish-ochraceous, the abdominal incisures and some short transverse stigmatal linear streaks darker in hue.

Long. 16 millim., lat. pronot. angl. 12 millim.

Hab. GUATEMALA, El Jicaro in Vera Paz (*Champion*).

Mr. Champion met with but a single specimen of this species. A second specimen, without a habitat, has for some time been in my own collection.

Edessa reticulata (p. 90).

To the localities given, add :—MEXICO, Tepic (*Schumann*), Chilpancingo and Tierra Colorada in Guerrero (*H. H. Smith*).

Edessa nigrispina (p. 90).

To the localities given, add :—MEXICO, Atoyac in Vera Cruz (*Schumann*); PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet, David (*Champion*).

15 (A). **Edessa fuscispina.** (Tab. XXXII. fig. 10.)

Edessa fuscispina, Stål, En. Hem. ii. p. 55. 34[1].

Hab. PANAMA, Bugaba and David (*Champion*).—COLOMBIA, Bogota[1].

This species is closely allied to *E. nigrispina*, Dall., and *E. bonasia*, Stål, both included in our fauna and figured in this work. From Dallas's species it may at once be separated by the shorter pronotal spines, and by the second joint of the antennæ being subequal to, or a little longer than, the third joint. From *E. bonasia* it differs by the shape of the scutellum, which is narrower and resembles that of *E. nigrispina*.

Edessa quadridens (p. 91).

To the localities given, add:—PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

19 (A). **Edessa jansoni,** n. sp. (Tab. XXXII. fig. 11.)

Body above and beneath, with legs, pale unicolorous ochraceous. Antennæ ochraceous, apex of the third joint black (fourth and fifth joints mutilated), second joint considerably longer than the third. Pronotum with a few scattered coarse punctures on the disk and towards the posterior margin, the lateral angles produced into somewhat short, but subacute spines, their apices narrowly edged with black. Scutellum more thickly but less coarsely punctate than the pronotum, the punctures being finest and thickest at the lateral margins. Corium thickly and finely punctate. Connexivum very narrowly edged with black.
Long. 18 millim., lat. pronot. angl. 12½ millim.

Hab. NICARAGUA, Chontales (*Janson, in coll. Dist.*).

Edessa jurgiosa (p. 92).

To the locality given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann*); PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet, Caldera, Boquete, David (*Champion*).

Some of the specimens received from the State of Panama are considerably larger than the Mexican type, and measure 23 millim. in length.

20 (A). **Edessa præfracta.** (Tab. XXXII. fig. 12.)

Brownish-ochraceous; lateral angles of the pronotum prominent, obtusely acute and black. Antennæ with the second and third joints subequal in length, fourth and fifth joints longest and also subequal in length. Pronotum very coarsely punctate; scutellum with the punctures thicker but finer; corium very thickly and finely punctate. Membrane cupreous. Body beneath dark ochraceous; abdomen mottled with some darker irregular-shaped spots, the disk longitudinally pale and levigate. Abdominal apical spines moderately long, with their apical halves black.
Long. 12 millim., lat. pronot. angl. 9 millim.

Hab. GUATEMALA, Paraiso (*Champion*).

Edessa junix (p. 92). (Tab. XXXII. fig. 13, var.)

To the locality given, add:—PANAMA, Bugaba and David (*Champion*).

The examples received from the State of Panama differ widely from the Mexican typical specimen here previously figured, being of a uniform green coloration above, with the membrane pale cupreous. Body beneath greenish-ochraceous, the legs ochraceous.

Edessa affinis (p. 92).

To the localities previously given, add:—PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

22 (A). **Edessa metata.** (Tab. XXXII. fig. 14.)

Head, pronotum, and scutellum pale olivaceous, apex of the scutellum sometimes paler in hue, but always with a subapical transverse purplish-brown fascia; corium pale purplish-brown; membrane dark cupreous, with its apex paler; apical abdominal spines black. Body beneath and legs pale ochraceous, lateral margins of the abdomen very narrowly black. Antennæ dark ochraceous, second joint shorter than the third, fourth and fifth joints longest and subequal, fifth joint darkest, with its base ochraceous. Pronotum, scutellum, and corium coarsely punctate; corium mottled with dark purplish in the form of two transverse fasciæ, one near the base and one about the centre. Scutellum with the apex subacute, but not reaching the apex of corium. Connexivum spotted with dark olivaceous.

Long. 13–14 millim., lat. pronot. angl. 7 millim.

Hab. PANAMA, Bugaba and David (*Champion*).

This species is allied to *E. trifurca*, Walk., but is smaller, and with the apex of the scutellum narrower and more acute; it is larger and more elongate than *E. affinis*, Dall., and has the scutellum more attenuated.

Edessa vinula (p. 92).

To the localities given, add:—MEXICO, Omilteme in Guerrero, Teapa in Tabasco (*H. H. Smith*); PANAMA, Bugaba, David (*Champion*).

Edessa lepida (p. 93).

To the locality given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann*).

In the typical specimen described by Stål the fifth joint of the antennæ was mutilated. In the perfect specimen now in our collection the apical joint is seen to have nearly its basal half pale ochraceous.

Edessa rixosa (p. 93).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann*), Teapa in Tabasco (*H. H. Smith*); GUATEMALA, San Isidro, Pantaleon, Mirandilla, Cahabon (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet, Caldera (*Champion*).

Edessa puncticornis (p. 94).

To the locality given, add:—MEXICO, Tepic (*Schumann*), Omilteme in Guerrero (*H. H. Smith*), Jalapa (*Höge*).

Edessa trifurca (p. 94).

To the locality given, add:—MEXICO, Tepic (*Schumann*), Cuesta de Misantla (*M. Trujillo*), Jalapa (*Höge*), Teapa in Tabasco (*H. H. Smith*); GUATEMALA, San Joaquin, Purula, and San Gerónimo in Vera Paz (*Champion*); HONDURAS, Ruatan Island (*Gaumer*).

In most of the specimens we have received the longitudinal and transverse fasciæ to the scutellum are more or less obsolete.

Edessa patricia (p. 94).

To the localities given, add:—PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

31 (A). **Edessa celsa,** n. sp. (Tab. XXXII. fig. 15.)

Head, pronotum, and scutellum olivaceous; corium purplish, with the veins ochraceous; membrane dark cupreous; connexivum very pale olivaceous, with very dark purplish spots. Body beneath ochraceous, the sutures, marginal abdominal spots, and reticulate markings on lateral areas of the abdomen purplish; legs ochraceous, femora and tibiæ streaked with blackish, the tarsi being of the same colour. Antennæ blackish, second and third joints subequal in length, fourth and fifth joints longest and subequal. Pronotum and scutellum rather finely punctate; corium very thickly and finely punctate. The scutellum has the apical area furrowed, the apex subacute and reaching the level of the apex of the corium. The pronotal angles are prominent and subacute.

Long. 14–16 millim., lat. pronot. angl. 9–10 millim.

Hab. PANAMA, David (*Champion*).

Two specimens of this very handsome species were captured by Mr. Champion.

32 (A). **Edessa expolita,** n. sp. (Tab. XXXII. fig. 16.)

Head, pronotum, and scutellum olivaceous; corium purplish, with the veins ochraceous; membrane dark cupreous; apical abdominal spines black; connexivum olivaceous. Body beneath pale ochraceous tinged with olivaceous; legs and antennæ pale reddish-ochraceous. Antennæ with the second joint slightly longer than the third, fourth and fifth joints longest, fourth joint a little shorter than the fifth. Pronotum and scutellum sparingly and very coarsely punctate. Corium very thickly and finely punctate; apex of the scutellum subacute, but not reaching the level of the apex of the corium. Apical abdominal spines long. Pronotal angles prominent, their apices obtusely acute and very slightly recurved.

Long. 19–21 millim., lat. pronot. angl. 11–13 millim.

Hab. PANAMA, Bugaba and Caldera (*Champion*).

This species is allied to *E. polita*, St. Farg. & Serv., but differs by its smaller size, more sparsely punctured pronotum, the pronotal angles more recurved at the apices, and the anal appendage in the female more deeply sinuate at the centre; from *E. patricia*, Stål, it is distinct by the coarse punctuation above, the absence of the pale lateral margins to pronotum, &c.

32 (B). **Edessa polymita,** n. sp. (Tab. XXXII. fig. 17.)

Head, pronotum, and scutellum brownish-ochraceous; corium darker, with the veins ochraceous, and with a large discal irregular purplish spot; membrane pale cupreous. Body beneath and legs pale castaneous, with a broad and irregular series of very bright levigate ochraceous spots to the lateral margins of the sternum and abdomen; pronotal angles beneath and some extreme marginal spots black; apical halves of the femora darker in hue. Antennæ with the second and third joints subequal in length, fourth and fifth longest and also subequal in length. Pronotum and scutellum with some scattered and very coarse dark olivaceous punctures; pronotum with the extreme lateral margins narrowly ochraceous, with a submarginal linear series of united fine dark-olivaceous punctures, the lateral angles prominent, subacute, and slightly

reflexed at the apices, which are black. Scutellum with the apex subacute, but not reaching the level of the apex of the corium. Connexivum olivaceous, narrowly margined with black. Corium thickly and finely punctate.

Long. 18 millim., lat. pronot. angl. 11 millim.

Hab. PANAMA, Bugaba (*Champion*).

Edessa collaris (p. 95).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann*); GUATEMALA, San Isidro (*Champion*); PANAMA, Bugaba (*Champion*).

This species varies very greatly in size.

Edessa mexicana (p. 95).

To the locality given, add:—MEXICO, Xucumanatlan and Omilteme, both in Guerrero (*H. H. Smith*).

35 (A). **Edessa indigena,** n. sp. (Tab. XXXII. fig. 18.)

Dark ochraceous, the punctures darker; lateral margins of the pronotum and basal lateral margin of the corium narrowly pale ochraceous; membrane concolorous. Body beneath pale ochraceous, sparingly punctate, the punctures darker in colour, the lateral and apical areas of abdomen greenish; legs reddish-ochraceous, the punctures darker in colour. Antennæ reddish-ochraceous, the second and third joints with dark speckles; second and third joints subequal in length, fourth and fifth joints longest and subequal in length, apical joint cylindrical. Head with the lateral lobes very thickly punctate, the ocelli red, the eyes fuscous. Pronotum with the punctures smaller and more continuous along the anterior and lateral margins; the lateral angles non-prominent. Scutellum with the apex subacute, not passing the inner angles of the corium. Connexivum thickly punctate, olivaceous, the punctures darker in colour.

Long. 14–15 millim.

Hab. MEXICO, Xucumanatlan in Guerrero (*H. H. Smith*).

Edessa rufomarginata (p. 96).

To the localities given, add:—PANAMA, Volcan de Chiriqui 4000 to 6000 feet, and Bugaba (*Champion*).

39 (A). **Edessa caldaria,** n. sp. (Tab. XXXII. fig. 19.)

Pale chocolate-brown; connexivum ochraceous, spotted with blackish, membrane bronzy-brown. Body beneath shining blackish; sternum and abdomen with discal segmental reddish-ochraceous fasciæ radiating on each side from the centre; an ochraceous spot at each lateral margin of the metasternum, and a marginal series of ochraceous spots to the abdomen; legs pale chocolate-brown, the tarsi paler. Antennæ pale ochraceous, second and third joints subequal in length, fourth and fifth joints longest, fourth a little shorter than fifth. Pronotum somewhat coarsely punctate and rugulose. Scutellum somewhat coarsely punctate, its apex broad, subacute, but not reaching the level of the apex of the corium. Corium very thickly and finely punctate. Apical angles of the abdomen not acutely produced. Body short and broad.

Long. 15–16 millim., lat. pronot. angl. 9–10 millim.

Hab. PANAMA, David and Caldera in Chiriqui (*Champion*).

Edessa cornuta (p. 97).

To the localities given, add:—Mexico, Ciudad in Durango (*Forrer*), Atoyac in Vera Cruz, Chilpancingo and Tepetlapa in Guerrero, Cuernavaca in Morelos, Teapa in Tabasco (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*), Jalapa (*F. D. G.*); Panama, Bugaba, Volcan de Chiriqui 2500 to 4000 feet, David (*Champion*).

Edessa cordifera (p. 97).

To the localities given, add:—Mexico, Tepic (*Schumann*), Cuernavaca in Morelos, Chilpancingo and Venta de Zopilote in Guerrero (*H. H. Smith*).

41 (a) **Edessa densata,** n. sp. (Tab. XXXI. fig. 24.)

Allied to *E. cordifera*, Walk., but distinguished by the less angulated apex of the scutellum and different coloration of the same, which is less pronounced pale ochraceous, and marked with dark punctures; the head is rather more elongate and narrower, the body broader and less elongate, and the membrane barely extending beyond the apex of the abdomen.

Long. 13–14 millim., lat. pronot. angl. 8 millim.

Hab. Mexico, Cuernavaca in Morelos (*H. H. Smith*).

Edessa sigillata (p. 98).

To the localities given, add:—Mexico, Cuesta de Misantla (*M. Trujillo*), Jalapa (*F. D. G. & M. Trujillo*), Orizaba (*F. D. G. & H. H. Smith*).

Edessa conspersa (p. 98).

To the localities given, add:—Mexico, Tepic (*Schumann*), Omilteme, Tepetlapa, Tierra Colorada, and Acaguizotla, all in Guerrero (*H. H. Smith*).

In a long series of specimens of this species the extreme apex of the scutellum is sometimes found to be pale ochraceous.

43 (a). **Edessa abdita,** n. sp. (Tab. XXXII. fig. 20.)

Allied to *E. conspersa*, Stål, but smaller, the lateral margins of the pronotum more convex, and without the sublateral series of punctures; the scutellum much less thickly punctate; sternum without the olivaceous spots; membrane shorter, scarcely passing the apex of the abdomen.

Long. 12 millim., lat. pronot. angl. 7 millim.

Hab. Mexico, Tepic (*Schumann*), Omilteme in Guerrero (*H. H. Smith*).

Edessa petersii (p. 98).

To the localities given, add:—Mexico, Cuernavaca in Morelos (*H. H. Smith*), Amula in Guerrero (*H. H. Smith*), Jalapa (*F. D. G.*).

45 (A). **Edessa picata,** n. sp. (Tab. XXXI. fig. 25.)

Allied to *E. petersii*, Dist., but differing by the apex of the scutellum, which is broad, obtusely rounded, and distinctly shaded with black; membrane short, scarcely passing the apex of the abdomen; lateral margins of the pronotum concolorous.

Long. 13 millim., lat. pronot. angl. 8 millim.

Hab. MEXICO, Jalapa (*F. D. G.*).

Edessa abdominalis (p. 99).

To the localities given, add:—MEXICO, Milpas in Durango (*Forrer*), Tepic (*Schumann*), Cuernavaca in Morelos, Amula in Guerrero (*H. H. Smith*).

Edessa privata (p. 99).

To the locality given, add:—MEXICO, Cuernavaca in Morelos, Chilpancingo in Guerrero (*H. H. Smith*).

PIEZOSTERNUM (p. 101).

Piezosternum subulatum (p. 102).

To the localities given, add:—PANAMA, Bugaba, Tolé (*Champion*).

PANTOCHLORA (p. 102).

Pantochlora vivida (p. 102).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann*).

HIRILCUS (p. 104).

Hirilcus alternatus (p. 104).

To the localities given, add:—MEXICO, Temax in North Yucatan (*Gaumer*).

LYCAMBES (p. 104).

Lycambes varicolor (p. 105).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann & H. H. Smith*).

PACHYLIS (p. 107).

Pachylis hector (p. 107).

To the localities given, add:—MEXICO, Venta de Zopilote, Teapa in Tabasco (*H. H. Smith*), Atoyac in Vera Cruz (*Schumann*), Valladolid in Yucatan (*Gaumer*); HONDURAS, Ruatan I. (*Gaumer*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet, San Feliz (*Champion*).

THASUS (p. 108).

Thasus gigas (p. 108).

To the localities given, add:—MEXICO, Xucumanatlan and Omilteme, both in Guerrero (*H. H. Smith*), Tepic (*Schumann*).

Dr. A. Dugès, 'La Naturaleza,' iii. pp. 52, 53, tab. figg. 1–7, has described and figured the "defensive apparatus" of this species. The insect is said to be able to eject a strong-smelling liquid to a distance of three feet.

Thasus acutangulus (p. 108).

To the localities given, add :—Mexico, Cuesta de Misantla (*M. Trujillo*).

MOZENA (p. 109).

1 (a). **Mozena gaumeri,** n. sp.

Ochraceous ; antennæ (excluding apical joint and extreme base of first joint), posterior lateral margins of the pronotal angles, and the posterior tibiæ black. Pronotum with the anterior margin and three central longitudinal lines (the median the longest) pale castaneous. Scutellum ochraceous, with the apex luteous. Corium with the claval and costal areas and the disk irregularly pale castaneous. Membrane shining pale castaneous. Connexivum alternately ochraceous and pale castaneous. Antennæ with the first and second joints subequal in length and longer than the third and fourth joints, which are also subequal; apical joint ochraceous. Pronotum with the lateral angles sublunate, strongly produced, the margins finely serrate, the apex of the produced angles terminating in a very short acute tooth. Posterior femora in the male very robust.

Long. 19–22 millim., lat. pronot. angl., ♂, 10 millim.

Hab. Mexico, Temax in North Yucatan (*Gaumer*).

This species is allied to *M. brunnicornis*, H.-S., in structure ; it also agrees in many particulars with the Nicaraguan insect described by the late J. Scott under the name of *Mictis* (?) *jansoni* (Ent. Monthly Mag. xix. p. 41), but as the pronotal angles are stated to be "rounded on their tips," *M. jansoni* is evidently not conspecific with the species here described.

Mozena lunata (p. 110).

To the localities given, add :—Mexico, Chilpancingo, Acaguizotla, Tepetlapa, Omilteme, Amula, Venta de Pelegrino, Tierra Colorada, and Venta de Zopilote, all in Guerrero, Puente de Ixtla and Cuernavaca in Morelos (*H. H. Smith*), Tepic (*Schumann*).

Mozena lurida (p. 111).

To the localities given, add :—Mexico, Temax in North Yucatan (*Gaumer*).

10. **Mozena (?) jansoni.**

Mictis (?) *jansoni*, Scott, Ent. Monthly Mag. xix. p. 41 [1].

Hab. Nicaragua, Chontales (*Janson* [1]).

We have not seen examples of this species. The name *Apodesmius* was proposed for it [1] in the event of it proving to belong to a new genus. It is now doubtfully included in *Mozena*.

Mozena nestor (p. 110).

To the locality given, add:—MEXICO, near the city (*Schumann*).

In the specimens we have received the lateral margins and apex of the scutellum are distinctly and broadly ochraceous.

Mozena ventralis (p. 111).

To the locality given, add:—MEXICO, Amula in Guerrero (*H. H. Smith*).

We have received a specimen exactly agreeing with Dr. Mayr's description in all respects save dimensions. Our specimen is a male measuring 20 millim.; the type was described as "♀. Long. 28 millim."

MELUCHA (p. 109).

Melucha phyllocnemis (p. 109).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann*).

2. **Melucha bicolor,** n. sp. (Tab. XXXIII. fig. 1.)

Body above black, more or less covered with greyish pubescence; membrane bronzy. Body beneath, rostrum, undersides of femora, and the tarsi dull reddish; apex of the scutellum luteous. First joint of the antennæ much longer than the second (remainder mutilated); lateral margins of the pronotum very coarsely serrate, the lateral angles subacutely produced, with the extreme apex subnodulose; connexivum with the apices of the segmental margins moderately spinous. Posterior tibiæ dilated, most strongly so interiorly, with a spine on angle of widest part and another at apex; between these spines is a series of much smaller ones; the posterior femora have a series of small spines beneath. Rostrum slightly passing the anterior coxæ, its apex pitchy.

Long. 25 millim., lat. pronot. angl. 11 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

A single specimen of this species has alone been received. Its distinct coloration will at once distinguish it from the two other described species of the genus—*M. phyllocnemis* and *M. gladiator*—which also have prominent pronotal angles.

3. **Melucha quinquelineata.** (Tab. XXXIII. fig. 2.)

Melucha quinquelineata, Stål, Ann. Soc. Ent. Fr. sér. 4, v. p. 175. 1 [1]; Walk. Cat. Het. iv. p. 54 [2].

Hab. PANAMA, Bugaba (*Champion*).—AMAZONS [1] [2].

A single specimen from Bugaba agrees exactly with Stål's description, and with an example in the British Museum obtained in the Amazon Region by Bates.

CAPANEUS (p. 111).

2 (A). **Capaneus chontalensis,** n. sp. (Tab. XXXIII. fig. 3.)

♀. Pale fuscous, membrane a little darker. Basal joint of the antennæ robust, slightly longer than the second (remainder mutilated). Pronotal angles well produced and angulated, directed upwardly but scarcely forwardly, their apices subacute, their margins distinctly serrate posteriorly and very obsoletely so anteriorly.

Long. 18 millim.

Hab. NICARAGUA, Chontales (*Janson*).

Allied to *C. achilles*, Stål, but differing by the shape of the pronotal angles, which are not directed forwardly. A single female example is all that we have received of this species.

Capaneus auriculatus (p. 112).

To the localities given, add:—MEXICO, Jalapa (*Höge*); GUATEMALA, San Juan, Panzos, Purula, and Teleman in Vera Paz (*Champion*).

3 (A). **Capaneus humerosus,** n. sp. (Tab. XXXIII. fig. 5.)

Brownish-ochraceous; pronotum with scattered small black tubercles, most numerous on the posterior angles, which are very strongly and broadly produced, slightly raised upwardly and with their apices subacute. Scutellum punctate and blackish at about centre. Corium, including clavus, somewhat thickly punctured with black; membrane bronzy-brown. Connexivum fuscous. Body beneath and legs pale castaneous; lateral margins of prosternum and its produced angles with black tubercles, its lateral areas with a few very small black tubercles and some coarse black punctures; metasternum with two small black foveæ near each lateral margin; an oblique broken reddish fascia extends from base of head to outer margin of metasternum. Rostrum dark castaneous, just passing the anterior coxæ. Antennæ finely setose; second joint slightly shorter than the first, third shortest, fourth about subequal to second.

Long. 23 millim., lat. pronot. angl. 13 millim.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. G.*).

A single example of this species was obtained; it is most closely allied to *C. auriculatus*, Stål.

Capaneus rubronotatus (p. 112).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

Capaneus vates (p. 112).

To the locality given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann*).

Capaneus tetricus (p. 112).

To the localities given, add:—MEXICO, Cuernavaca in Morelos, Tepetlapa in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*), Jalapa and Orizaba (*F. D. G.*), Teapa in Tabasco (*H. H. Smith*), Tabi in Yucatan (*F. D. G.*), Temax in North Yucatan (*Gaumer*); GUATEMALA, Volcan de Atitlan (*Champion*).

Capaneus odiosus (p. 113).

To the localities given, add :—Mexico, Teapa in Tabasco (*H. H. Smith*); Panama, Bugaba, David, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Capaneus spurcus (p. 113).

To the localities given, add :—Mexico, Milpas in Durango (*Forrer*), Tepic (*Schumann*), Cuernavaca in Morelos (*H. H. Smith*).

ARCHIMERUS (p. 113).

Archimerus scutellaris (p. 113).

To the localities given, add :—Mexico, Jalapa (*F. D. G.*, *Höge*), Atoyac in Vera Cruz, Chilpancingo in Guerrero (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); Nicaragua, Chontales (*Janson*); Panama, Bugaba, Volcan de Chiriqui 2000 to 3000 feet, Caldera, David (*Champion*).

In specimens from Panama the lateral angles of the pronotum are a little more developed than in examples from more northern localities.

2 (a). **Archimerus chiriquinus,** n. sp. (Tab. XXXIII. fig. 4.)

Blackish or very dark fuscous, the corium more or less obscure castaneous, apical joint of the antennæ bright orange-yellow, tarsi brownish-ochraceous ; connexivum obscurely spotted with ochraceous at the segmental incisures.

Var. Apex of the third joint of the antennæ pale castaneous, scutellum more or less ochraceous, corium sometimes obscure castaneous mottled with ochraceous.

The first and second and the third and fourth joints of the antennæ are subequal in length ; the pronotum is moderately granulose, the pronotal angles being well produced, broad, spatulate, obsoletely angulated posteriorly and slightly directed upwardly ; the disk of the scutellum, excepting base, is transversely rugulose ; the corium, including clavus, is obscurely punctate ; the membrane is bronzy ; the posterior femora are strongly incrassated, with a few tubercles above and strongly spined on each side.

Long. 19–20 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Many specimens.

Archimerus indecorus (p. 114).

To the localities given, add :—Mexico, Ciudad in Durango (*Forrer*), Cuernavaca in Morelos (*H. H. Smith*), Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*), Omilteme and Xucumanatlan, both in Guerrero (*H. H. Smith*); Guatemala, Cubilguitz in Vera Paz (*Champion*).

OJEDANA, gen. nov. (To follow the genus *Archimerus*, p. 114.)

Head projecting a little beyond the antenniferous tubercles ; antennæ with the first, second, and third joints incrassated and moderately pilose, fourth joint slender and glabrous ; first joint longest, third shortest,

second and fourth about subequal in length. Pronotum very coarsely granulate, the lateral angles prominent, the truncated portion of the posterior margin a little broader than the base of the scutellum; abdomen with the lateral margins dilated; rostrum reaching the anterior coxæ, robust, second joint slightly longer than the third; anterior and intermediate femora moderately incrassated, posterior femora much more strongly incrassated, longitudinally tuberculate, both inwardly and outwardly; posterior tibiæ with a prominent spine beneath near centre.

This genus is allied to *Archimerus*, from which it is at once differentiated by the peculiar structure of the antennæ, apart from other characters.

1. **Ojedana loricata,** n. sp. (Tab. XXXIII. fig. 6.)

Head and pronotum black, greyishly tomentose; scutellum black, sparingly tomentose; corium and connexivum very dark castaneous, the last with a series of obscure small ochraceous spots at the incisures; membrane brassy-black. Body beneath and legs dark castaneous, a broad oblique fascia on each lateral area of the sternum and eight discal spots in a double series to abdomen—two on each of the first four segments—glabrous and shining golden-yellow. Antennæ with the first three joints purplish-black, with their bases moderately greyish, fourth joint a little paler in hue; the first three joints are not only incrassated, but also distinctly thickened towards their apices, the third joint has its basal third attenuated. The pronotum is very coarsely granulate, the lateral angles prominently and subacutely produced, their lateral margins granulate; the scutellum is coarsely wrinkled; the posterior femora have a double series of small tubercles externally, and a single series internally.

Long. 21 millim., lat. pronot. angl. 10 millim.

Hab. Panama, Bugaba (*Champion*).

We have only received a single specimen of this fine Heteropteron.

MAMURIUS (p. 115).

Mamurius mopsus (p. 115).

To the localities given, add:—Mexico, Milpas in Durango (*Forrer*), Jalapa (*Höge*), Dos Arroyos and Chilpancingo, both in Guerrero (*H. H. Smith*), Temax in North Yucatan (*Gaumer*).

BARDISTUS. (To follow the genus *Mamurius*, p. 115.)

Bardistus, Dallas, List Hem. ii. pp. 377 & 380 (1852); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 539.

This is a genus comprising a few large and generally broadly ovate species, in which the lateral margins and angles of the pronotum and the lateral margins of the abdomen are dilated. Three species have been described, and another is here added. The distribution is purely neotropical.

1. **Bardistus serrulatus.** (Tab. XXXIII. fig. 7.)

Coreus serrulatus, Perty, Del. An. p. 169, t. 33. f. 14[1].

Cerbus umbrinus, Burm. Handb. ii. 1, p. 340. 2[2]; H.-S. Wanz. Ins. vi. p. 61, fig. 623.

Hab. Panama (*Boucard*), Volcan de Chiriqui 2000 to 3000 feet (*Champion*).—Amazons, Pará[2]; Brazil, Sebastianopolis[1].

I have excluded from the synonymy the identification of Dallas (List Hem. ii. p. 381. 1, t. 12. f. 3), as the specimens in the British Museum apparently belong to a darker species with more serrated pronotal margins. Our Panama specimens, however, agree well with Perty's figure.

2. **Bardistus formidabilis,** n. sp. (Tab. XXXIII. fig. 9.)

Pale brownish-ochraceous; antennæ, eyes, lateral and angular margins of the pronotum, three discal longitudinal fasciæ to pronotum (of which the central one only reaches the anterior margin), a subquadrate spot at base of scutellum, a narrow submarginal fascia to corium extending to half its length, femora beneath (excluding apices), tibiæ, tarsi, three elongate spots on each side of prosternum, five streaks (four rounded and one transverse) on mesosternum, a rounded discal spot and a streak at angle of posterior margin of the metasternum, and the stigmata black. Corium with three oblique fuscous streaks; membrane bronzy; connexivum alternately black and dull reddish. The first and second joints of the antennæ are subequal in length, third shortest, fourth longest; the lateral margins of the pronotum are coarsely crenulate, the lateral angles strongly produced, with a slender apical black spine.

Long. 28 millim., lat. pronot. angl. 13 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

One female specimen is all that we have received of this handsome and well-marked species.

NEMATOPUS (p. 115).

Nematopus lepidus (p. 115).

To the localities given, add:—PANAMA, Volcan de Chiriqui 2500 to 4000 feet, San Feliz (*Champion*).

Nematopus nigro-annulatus (p. 115).

To the localities given, add:—MEXICO, Omealca in Vera Cruz (*M. Trujillo*).

3. **Nematopus ruficrus.**

Anisoscelis ruficrus, Perty, Del. An. p. 171, t. 34. fig. 4 [1].

Nematopus ruficrus, Burm. Handb. ii. 1, p. 337. 3 [2]; H.-S. Wanz. Ins. iii. p. 61, fig. 275, et vi. p. 78, fig. 649 [3]; Blanch. Hist. des Ins. p. 124. 3, Hém. t. 4. fig. 4 [4]; Dall. List Hem. ii. p. 426. 10 [5]; Stål, En. Hem. i. p. 142. 6 [6].

Pachymeria ruficrus, Spin. Ess. Hem. p. 132. 1 [7].

Hab. PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).—AMAZONS [1], Pará [2]; BRAZIL [3 4 5], Bahia [2], Rio Janeiro [6].

4. **Nematopus nervosus.**

Nematopus nervosus, Lap. Ess. Hem. p. 30 [1]; A. & S. Hist. des Hém. p. 200. 2 [2]; Dall. List Hem. ii. p. 426. 12; Stål, Ann. Soc. Ent. Fr. sér. 4, iv. p. 56. 1; En. Hem. i. p. 142. 7.

Nematopus chalybeus, H.-S. Wanz. Ins. vi. p. 79.

Stoll, Pun. fig. 255.

Hab. PANAMA, San Feliz (*Champion*).—GUIANA, Cayenne [2]; BRAZIL [1].

SAGOTYLUS (p. 115).

Sagotylus confluentus (p. 116).

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa, Ventanas in Durango (*Forrer*), Tepic in Jalisco (*Schumann*), Jalapa (*Höge*), Dos Arroyos in Guerrero (*H. H. Smith*).

ACANTHOCERUS (p. 116).

Acanthocerus clavipes (p. 116).

To the localities given, add:—PANAMA, Bugaba, Caldera, Volcan de Chiriqui 2500 to 4000 feet, Tolé (*Champion*).

This species is apparently not found in our region north of the State of Panama.

MACHTIMA (p. 117).

Machtima mexicana (p. 117).

To the localities given, add: — MEXICO, Atoyac in Vera Cruz (*Schumann*), Dos Arroyos in Guerrero (*H. H. Smith*); PANAMA, Bugaba, David, Tolé (*Champion*).

An examination of more specimens increases the opinion formerly expressed that *M. mexicana* is but a local race of *M. crucigera*, Fabr.

ACANTHOCEPHALA (p. 117).

Acanthocephala latipes (p. 118).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann*); PANAMA, Bugaba, San Feliz (*Champion*).

Acanthocephala declivis (p. 118).

To the localities given, add:—MEXICO, Jalapa (*Höge*), Atoyac in Vera Cruz (*Schumann*), Venta de Zopilote in Guerrero (*H. H. Smith*), Temax in North Yucatan (*Gaumer*).

Var. **guatemalena** (p. 119).

To the localities given, add:—MEXICO, Tampico in Tamaulipas (*Richardson*); GUATEMALA, Mirandilla (*Champion*).

Var. **panamensis** (p. 119).

To the localities given, add:—COSTA RICA, San José (*Boucard*); PANAMA, Bugaba, David, Tolé (*Champion*).

Var. **calderensis.**

This variety differs from that described under the name of *panamensis* by having the posterior tibiæ more regularly widened, not notched or sinuated outwardly near base.

Long. 35 millim.

Hab. PANAMA, Caldera (*Champion*).

Acanthocephala granulosa (p. 120).

Acanthocephala luctuosa, huj. op. p. 120.

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa, Ventanas in Durango (*Forrer*), Tepic in Jalisco (*Schumann*), Cuernavaca in Morelos (*H. H. Smith*), Omealca (*M. Trujillo*), Orizaba (*H. H. Smith & F. D. G.*), Misantla and Jalapa (*F. D. G.*), Amula, Chilpancingo, Omilteme, Rincon, Tierra Colorada, Venta de Pelegrino, all in Guerrero, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); GUATEMALA, Panzos (*Conradt*), Lanquin and Senahu (*Champion*).

From the examination of a long series of specimens obtained from different localities in Mexico, in which the shape of the posterior tibiæ of both sexes and the colour of the antennæ are of the most variable character, I am now inclined to consider the *A. granulosa*, Dall., and the *A. luctuosa*, Stål, as but different forms of one species. The variation is also of such an intermittent character that I cannot—with the present abundant material—separate Stål's form as a constant variety, though we have already figured it in its typical appearance.

Acanthocephala bicoloripes (p. 120).

To the localities given, add:—PANAMA, Caldera, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

STENOSCELIDEA (p. 121).

Stenoscelidea ænescens (p. 121).

To the localities given, add:—MEXICO, Acaguizotla, Rincon and R. Papagaio, all in Guerrero, Teapa in Tabasco (*H. H. Smith*).

LAMINICEPS. (To follow the genus *Stenoscelidea*, p. 121.)

Laminiceps, Costa, Rendic. Accad. Napol. ii. p. 250 (1863); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 542.
Junia, Stål, Ann. Soc. Ent. Fr. sér. 4, v. p. 179 (1865).

Differs from *Stenoscelidea* by the non-dilated posterior tibiæ.

This is another purely neotropical genus consisting of some half-dozen species. Nicaragua is, according to our present knowledge, the most northern limit of the genus.

1. **Laminiceps quadrisignata,** n. sp. (Tab. XXXIII. fig. 11, ♂.)

Body above purplish-brown, thickly and coarsely punctured with black; each corium with two luteous spots margined more or less with blackish, and situate one near inner angle at base of membrane, and the other before the apex; membrane black; body beneath and legs pale castaneous; sternum coarsely and darkly punctate; antennæ black, base of the first joint pale castaneous, bases of the second and third joints and the whole of the fourth joint—excluding base—luteous. The head is pale castaneous and impunctate; eyes black, ocelli red. The lateral angles of the pronotum are prominently and obtusely angulated; the posterior femoral spines are somewhat strongly developed; the rostrum reaches the posterior coxæ; the posterior femora beneath in the male sex have a long spine near base, and five spines on the apical half, of which the penultimate is longest—on their upper surface are a few small scattered tubercles; the posterior tibiæ are closely serrated on their inner margin.

Long. 17–18 millim.

Hab. NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba (*Champion*).

ANISOSCELIS (p. 122).

Anisoscelis gradadia (p. 122).

To the localities given, add:—PANAMA, Bugaba (*Champion*).

Anisoscelis hymeniphera (p. 123).

To the locality given, add:—MEXICO, Cuernavaca in Morelos (*H. H. Smith*), Cuesta de Misantla in Vera Cruz (*M. Trujillo*).

This is apparently a rare species; only two specimens have been received in our large Mexican collections, and a single Mexican example is in my own collection.

Anisoscelis affinis (p. 123).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann*), Acapulco in Guerrero, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*).

DIACTOR. (To follow the genus *Anisoscelis*, p. 123.)

Diactor, Perty, Del. An. p. 169 (1830); Spin. Ess. Hem. p. 199 (1837); Stål, Öfv. Vet.-Ak. Förh. 1867, p. 544.

The principal distinguishing feature that separates this genus from *Anisoscelis* is found, as well pointed out by Stål, in "Spiraculis a basi et ab apice segmentorum ventris æque longe vel a basi quam ab apice longius remotis."

Diactor is a neotropical genus and only two species are at present known.

1. **Diactor bogotanus.** (Tab. XXXIII. fig. 8.)

Diactor bogotanus, Stål, En. Hem. i. p. 160. 2[1].

Hab. PANAMA, Bugaba (*Champion*).—COLOMBIA, Bogota [1].

A single specimen was obtained by Mr. Champion, agreeing fairly well with Stål's description.

LEPTOGLOSSUS (p. 123).

Leptoglossus phyllopus (p. 124).

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa, Ventanas in Durango (*Forrer*), Tepic in Jalisco, Atoyac (*Schumann*), Omealca (*M. Trujillo*), Orizaba (*H. H. Smith & F. D. G.*), Chilpancingo in Guerrero, Teapa in Tabasco (*H. H. Smith*); PANAMA, Bugaba, Caldera (*Champion*).

Leptoglossus zonatus (p. 125).

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa, Ventanas in Durango (*Forrer*), Jalapa (*Höge*), Atoyac (*Schumann*), Chilpancingo in Guerrero (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); GUATEMALA, Volcan de Atitlan 2500 feet, Mirandilla (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Leptoglossus stigma (p. 125).

To the localities given, add:—COSTA RICA, Irazu (*Rogers*); PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

The specimens from Panama are mostly large, and have the transverse fascia to the corium straight, or very obscurely sinuate.

Leptoglossus cinctus (p. 125).

To the localities given, add:—MEXICO, Rincon in Guerrero (*H. H. Smith*); NICARAGUA, Chontales (*Janson*); PANAMA, Caldera, Volcan de Chiriqui 4000 to 6000 feet, Tolé (*Champion*).

Leptoglossus lineosus (p. 126).

To the localities given, add:—MEXICO, Tepic in Jalisco (*Schumann*), La Venta in Guerrero (*H. H. Smith*).

Leptoglossus gonagra (p. 126).

To the localities given, add:—MEXICO, Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*), Temax in North Yucatan (*Gaumer*).

NARNIA (p. 126).

2. **Narnia inornata,** n. sp. (Tab. XXXIII. fig. 10.)

♂. Body above very pale fuscous and obscurely greyish-pilose; head with the discal area between the eyes blackish, the lateral margins and the eyes of the same colour; antennæ with the basal joint castaneous, remainder ochraceous, second joint longest, fourth joint a little shorter than the third; pronotum somewhat coarsely punctate, the lateral angles moderately prominent and subacute; scutellum coarsely

punctate, with its apex pale brownish; corium somewhat paler in hue, finely and obscurely punctate, the membrane bronzy in hue. Body beneath very much darker, or blackish; head with a pale brownish fascia on each lateral margin; rostrum and legs pale brownish, the posterior femora and about the basal half of the posterior tibiæ blackish. Abdomen with a very strong and wide longitudinal sulcation, which is continued through the sternum. Rostrum not reaching beyond the apex of the fourth abdominal segment. Femora incrassated, with a double row of spines inwardly and a single row of tuberculous spines outwardly; posterior tibiæ with their basal halves moderately dilated on each side, more strongly inwardly where the margin is spinous.

♀. Posterior tibiæ more strongly dilated than in the male, inner dilated portion with a greyish spot; posterior tibiæ more slender and paler in hue.

Long. ♂ 19 millim., ♀ 16 millim.

Hab. Mexico, Amula in Guerrero (*H. H. Smith*).

N. inornata differs from the other Mexican species, *N. femorata*, Stål, by the absence of the white fascia to the corium; the shorter rostrum, which does not quite reach the apex of the fourth ventral segment; the somewhat less dilated posterior tibiæ, of which the inner area is less oblique at the apex; the fourth joint of the antennæ shorter than the third, &c.

A single pair (♂ and ♀) were taken by Mr. Smith at Amula.

LEPTOSCELIS (p. 127).

Leptoscelis tricolor (p. 127).

To the localities given, add:—Panama, Bugaba (*Champion*).

PHTHIA (p. 127).

Phthia lunata (p. 128).

To the localities given, add:—Mexico, Atoyac in Vera Cruz (*Schumann*); Panama, Bugaba, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Phthia picta (p. 128).

To the localities given, add:—Mexico, Presidio de Mazatlan in Sinaloa (*Forrer*), Cuernavaca in Morelos, Atoyac in Vera Cruz (*H. H. Smith*), Omealca (*M. Trujillo*), Orizaba (*H. H. Smith & F. D. G.*); Guatemala, El Reposo, San Isidro, Volcan de Atitlan 2500 to 3000 feet (*Champion*).

SPARTOCERA (p. 130).

Spartocera granulata (p. 130).

To the localities given, add:—Panama, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Spartocera fusca (p. 130).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*H. H. Smith*), Misantla (*F. D. G.*), Jalapa (*Höge*), Orizaba (*M. Trujillo*); GUATEMALA, El Tumbador (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

3. **Spartocera gigantea,** n. sp. (Tab. XXXIII. fig. 13.)

Body above reddish-ochraceous, the membrane of a pale cinnamon hue; antennæ, the antenniferous tubercles and lateral margins of head in front of eyes, anterior area of pronotum and two diverging central fasciæ from thence to base, where they are united along basal margin, a central longitudinal fascia on basal half of scutellum, base of lateral margins to corium, a series of large subquadrate spots to connexivum, underside of body and legs, black. Body beneath with a large spot on each lateral area of head, two spots on each lateral area of pro-, meso-, and metasternum, the produced pronotal angles, and a series of discal abdominal spots reddish-ochraceous; abdominal margins ochraceous crossed by black fasciate spots. The first, second, and third joints of the antennæ are almost subequal in length, the apical joint shortest; the pronotum is rugulose, the lateral angles laminately produced, slightly directed upwardly and posteriorly obtusely angulated, in front of these angles the lateral margins are distinctly serrate.

Long. 28 millim., lat. pronot. angl. 9 millim.

Hab. COSTA RICA (*Van Patten*).

A strikingly handsome and distinct species of the genus.

SEPHINA (p. 131).

Sephina geniculata (p. 132).

To the locality given, add:—PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Sephina rogersi (p. 132).

To the locality given, add:—PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Sephina limbata (p. 132).

To the localities given, add:—MEXICO, Mazatlan in Sinaloa (*Forrer*), Tepic in Jalisco (*Schumann*), Atoyac in Vera Cruz (*H. H. Smith*), Jalapa (*Höge*), Omealca (*M. Trujillo*), Orizaba (*H. H. Smith & F. D. G.*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Sephina vinula (p. 133).

To the localities given, add:—MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

CHARIESTERUS (p. 133).

Chariesterus albiventris (p. 134).

To the locality given, add:—MEXICO, Ciudad in Durango (*Forrer*), Cuernavaca in Morelos, Chilpancingo and Tepetlapa in Guerrero (*H. H. Smith*), Atoyac in Vera Cruz (*Schumann*).

Chariesterus mœstus (p. 134).

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*), Tepic in Jalisco (*Schumann*), Atoyac in Vera Cruz, Chilpancingo, Rincon, and Tepetlapa, all in Guerrero, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*).

4. **Chariesterus robustus,** n. sp. (Tab. XXXIII. fig. 12.)

Body above castaneous; body beneath, legs, and antennæ pale castaneous; membrane bronzy-black; tarsi fuscous. Basal joint of the antennæ very robust, and a little longer than the second joint, third joint black at its dilatation, apical joint dark fuscous; pronotum with the lateral angles well produced, dilated, with a short acute spine at apex, rounded anteriorly and truncately sinuate posteriorly.

Long. 10 millim.

Hab. MEXICO, Temax in North Yucatan (*Gaumer*).

A species to be recognized by the robust pronotal angles. One specimen has only been received.

5. **Chariesterus cuspidatus,** n. sp. (Tab. XXXIII. fig. 14.)

Body above castaneous; antennæ, lateral angles and posterior margin of pronotum, membrane, apices of tibiæ, and the tarsi fuscous. Body beneath pale castaneous, ornamented with small black spots; head beneath and a sublateral fascia on each side of sternum greyishly tomentose. Basal joint of antennæ robust, perceptibly thickened at apex, and considerably longer than the second joint, apical joint somewhat greyish; pronotal angles produced in long straight slender spines, behind each of which is another small subobsolete tubercle or spine.

Long. 10 millim.

Hab. PANAMA, David, San Miguel in the Pearl Islands (*Champion*).

A single specimen was obtained by Mr. Champion at each of the above localities. The species is differentiated by the long and slender spines to the pronotal angles.

PLAPIGUS (p. 134).

Plapigus circumcinctus (p. 134).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz, Acaguizotla in Guerrero, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Cahabon, Pantaleon (*Champion*).

STALUPTUS (p. 135).

Staluptus marginalis (p. 135).

To the localities given, add:—MEXICO, Milpas in Durango (*Forrer*), Jalapa (*Höge*), Acaguizotla, Amula, Chilpancingo, and Xucumanatlan, all in Guerrero (*H. H. Smith*).

MADURA (p. 135).

Madura perfida (p. 135).

To the locality given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Cahabon, Cubilguitz, Zapote (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

CHELINIDEA (p. 136).

Chelinidea tabulata (p. 136).

To the localities given, add:—MEXICO, Chilpancingo and Mescala in Guerrero (*H. H. Smith*).

MARGUS (p. 136).

Margus inconspicuus (p. 137).

To the localities given, add:—MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

Margus inornatus (p. 137).

To the locality given, add:—MEXICO, Ciudad in Durango (*Forrer*), Cuernavaca in Morelos, Chilpancingo, Omilteme, and Xucumanatlan, all in Guerrero, Atoyac in Vera Cruz (*H. H. Smith*), Jalapa (*Höge*); GUATEMALA, Quiche Mts. (*Champion*).

Margus obscurator (p. 137).

To the localities given, add:—MEXICO, Chilpancingo in Guerrero (*H. H. Smith*); GUATEMALA, Capetillo, Cahabon, Senahu (*Champion*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet, Peña Blanca, Tolé (*Champion*).

CATORHINTHA (p. 138).

Catorhintha mendica (p. 138).

To the localities given, add:—MEXICO, Acapulco and R. Papagaio in Guerrero (*H. H. Smith*).

Catorhintha selector (p. 138).

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*), Cuernavaca in Morelos, Acapulco, Amula, Dos Arroyos, La Venta, and Tepetlapa, all in Guerrero (*H. H. Smith*), Temax in North Yucatan (*Gaumer*).

CIMOLUS (p. 139).

Cimolus vitticeps (p. 139).

To the localities given, add:—MEXICO, Sierra Madre de Tepic in Jalisco (*Richardson*), Teapa in Tabasco (*H. H. Smith*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

ANASA (p. 139).

Anasa andresii (p. 141).

To the localities given, add:—MEXICO, Temax in North Yucatan (*Gaumer*); PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Anasa bellator (p. 142).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz, Dos Arroyos and Venta de Pelegrino in Guerrero, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Mirandilla (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet, Caldera, David (*Champion*).

Anasa scorbutica (p. 142).

To the localities given, add:—MEXICO, Hacienda de Bleados in San Luis Potosi (*Dr. Palmer*), Cuernavaca in Morelos, Orizaba in Vera Cruz, Amula, Chilpancingo, Rincon, Tepetlapa, and Xucumanatlan, all in Guerrero (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); GUATEMALA, Cerro Zunil, Sabo in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Anasa tauriformis (p. 142).

To the locality given, add:—PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

6 (A). **Anasa montivaga,** n. sp. (Tab. XXXIII. fig. 19.)

Body above pale castaneous; membrane fuscous, with its basal angle blackish; connexivum castaneous, slightly spotted with luteous; antennæ luteous, first joint annulated with black, second and third joints largely black near base and apex, fourth joint with about basal half black. Body beneath and legs pale castaneous, the stigmata black, the femora with paler longitudinal streaks. The head has two distinct luteous spines near the base of the antennæ; the first and second joints of the antennæ are subequal in length, the third longest, the fourth shortest; the pronotal angles are well developed and obtusely angulated.

Long. 12 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

A single carded specimen is all we possess of this species. In general form, colour, and appearance it resembles *A. flavo-vittata*, Dist., from which it is altogether differentiated by the spines to the head, the varied colour of the antennæ, &c.

7 (A). **Anasa delibata,** n. sp. (Tab. XXXIII. fig. 17.)

Brownish-ochraceous; antennæ black, the apical joint luteous with its base infuscated; corium with a large discal spot near the inner angle and with the apex black; membrane dark fuscous, obscurely irrorated with ochraceous and with the apical margin pale greyish; pro-, meso-, and metasternum with an obscure fuscous spot near each lateral margin; abdomen beneath clouded with fuscous; femora spotted with black; connexivum ochraceous, with large subquadrate blackish spots. The lateral margins of the pronotum are anteriorly distinctly serrate, and the posterior angles well produced with their apices obtusely angulated and slightly directed backwardly; the body above, excluding the head, is coarsely and somewhat darkly punctate; the antennæ are setose, with the first and third joints subequal in length, and longer than the second.

Long. 13 millim.

Hab. MEXICO, Tierra Colorada in Guerrero (*H. H. Smith*).

Allied to *A. notatipennis*, Stål, but differing by the shape of the pronotal angles, the colour of the posterior tibiæ, &c.

8 (A). **Anasa decretoria,** n. sp. (Tab. XXXIII. fig. 16.)

Allied to *A. lita*, Dist., but smaller, the lateral angles of the pronotum not spinously produced but obtusely subprominent and concolorous, scutellum wholly black, apical joint of antennæ shorter and comparatively more robust.

Long. 9–10 millim.

Hab. GUATEMALA, Calderas 7000 feet, Volcan de Agua 10,000 feet (*Champion*).

Three specimens were taken of this well-marked species.

Anasa madida (p. 143).

To the locality given, add:—PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Anasa capaneodes (p. 144).

To the localities given, add:—MEXICO, Jalapa in Vera Cruz (*F. D. G.*).

Anasa costalis (p. 144).

To the localities given, add:—MEXICO, Xucumanatlan in Guerrero (*H. H. Smith*).

Anasa flavo-vittata (p. 145).

To the locality given, add:—PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Anasa mucronata (p. 145).

To the locality given, add:—MEXICO, Temax in North Yucatan (*Gaumer*).

24. **Anasa versicolor,** n. sp. (Tab. XXXIII. fig. 18.)

Black; corium, connexivum, lateral margins of sternum, and abdominal margins ochraceous, first and second abdominal segments beneath dull reddish. Antennæ black, the apical joint reddish with its base black.

Pronotum thickly and coarsely punctate, the lateral angles prominent, slightly directed upwardly and obtusely angulated; inner margin of clavus black. Corium thickly and finely punctate. Antennæ with the third joint longest, the first and second subequal in length, or the second a little longer than the first.

Long. ♂ 11 millim., ♀ 14 millim.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*).

We have received a single pair of this species from Mr. Smith; its unique coloration alone renders it very distinct.

ZICCA (p. 146).

Zicca commaculata (p. 146).

To the locality given, add:—PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Zicca tæniola (p. 147).

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*), Cuernavaca in Morelos (*H. H. Smith*), San Lorenzo near Cordova (*M. Trujillo*), Atoyac (*H. H. Smith*) and Orizaba (*H. H. Smith & F. D. G.*), Dos Arroyos, Rincon, R. Papagaio, Tepetlapa, and Tierra Colorada, all in Guerrero, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Zapote (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Zicca recurva (p. 147).

To the localities given, add:—MEXICO (*Sallé*); GUATEMALA, El Tumbador, Zapote (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

A long series of specimens obtained by Mr. Champion in Panama are now before me. These are more obscure and dark castaneous than other examples, and are probably discoloured. The pronotum is in many instances unicolorous.

VILGA (p. 147).

2. **Vilga mexicana,** n. sp. (Tab. XXXIII. fig. 20.)

Pale fuscous; tibiæ and tarsi pale ochraceous, the tibiæ annulated at base, centre, and apex with fuscous; tarsi shaded with fuscous. Basal joint of the antennæ incrassated, longly setose and spinous, second and third joints longly setose, second joint considerably shorter than the first, third longest, fourth shortest and thickened; femora (excluding bases) dark fuscous.

Long. 7 millim.

Hab. MEXICO, Omilteme and Tierra Colorada in Guerrero (*H. H. Smith*).

Allied to *V. dallasi*, Dist., but differing by the short second joint of the antennæ, the

very much shorter spines to the lateral margins of the pronotum and abdomen, and the less produced and spinous lateral angles of the pronotum. Mr. Smith sent us one fully developed specimen from Tierra Colorada, and an immature form from Omilteme.

3. **Vilga dissimilis,** n. sp. (Tab. XXXIII. fig. 21.)

Pale fuscous, posterior margin of pronotum, lateral margins of scutellum, apical joint of antennæ, and the femora dark fuscous; scutellum reddish-ochraceous, with its apex greyish-white; connexivum brownish-ochraceous. The antennæ have the three basal joints prominently setose, but the basal joint is not spinose; the first and third joints are subequal in length, or the third is a little longer than the first, the second and fourth joints are almost subequal in length; the pronotum has the lateral margins longly setose but not spinous, the lateral angles are produced in acute spines, slightly directed forwardly and upwardly; the connexivum is distinctly spined at the segmental incisures; the legs are prominently and distinctly setose; the pronotum and corium are coarsely punctate, the scutellum less strongly so. (Underside of the body imperfectly seen, the specimen described being carded.)

Long. 7 millim.

Hab. Panama, David (*Champion*).

This species is somewhat divergent from the typical form of the genus, by the condition of the basal joint of the antennæ, which is setose, not spinous.

4. **Vilga divaricata,** n. sp. (Tab. XXXIII. fig. 22.)

Brownish-ochraceous; two central longitudinal lines extending through head and pronotum, basal margin of pronotum, lateral margins of scutellum, a small excavated spot beneath the inner angle of the corium, and the segmental incisures to the connexivum dark fuscous; the tibiæ are paler in hue, with their bases and apices darker. The antennæ are very obscurely setose, the third joint a little longer than the first and the fourth a little shorter than the second; the pronotal angles are very acutely produced and directed forwardly and upwardly; the lateral margins of the connexivum are prominently spined at the segmental incisures.

Long. 7 millim.

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

A single specimen of this insect was obtained by Mr. Champion. It differs principally from the preceding species by the more prominently and acutely spined lateral angles of the pronotum, whilst the basal joint of the antennæ is even less setose and altogether non-spinous. It is clear that the diagnosis of Stål's genus *Vilga* will have to be less strictly defined, or more generic division will be necessary.

CEBRENIS (p. 149).

Cebrenis centro-lineata (p. 149).

To the localities given, add:—Mexico, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); Panama, Bugaba (*Champion*).

Cebrenis robusta (p. 150).

To the localities given, add:—Mexico, Ciudad in Durango (*Forrer*), Cuernavaca in Morelos (*H. H. Smith*).

HYPSELONOTUS (p. 150).

Hypselonotus punctiventris (p. 150).

To the localities given, add:—MEXICO, Ventanas in Durango (*Forrer*), Cuernavaca in Morelos (*H. H. Smith*), Atoyac in Vera Cruz (*Schumann*), Acaguizotla and Chilpancingo in Guerrero (*H. H. Smith*).

Hypselonotus intermedius (p. 151).

To the locality given, add:—MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*), Tepic in Jalisco (*Schumann*), Acapulco, Chilpancingo, R. Papagaio, and Tepetlapa, all in Guerrero (*H. H. Smith*); NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba (*Champion*).

In some specimens the pronotum possesses similar longitudinal fasciæ as in typical forms of *H. punctiventris*, in others the transverse fascia to the corium is absent.

Hypselonotus lineatus (p. 151).

To the localities given, add:—MEXICO, Orizaba (*H. H. Smith & F. D. G.*), Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Hypselonotus fulvus (p. 151).

To the localities given, add:—PANAMA, Caldera, David, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Hypselonotus concinnus (p. 152).

To the localities given, add:—MEXICO, Tepic in Jalisco (*Schumann*), Cuernavaca in Morelos, Atoyac in Vera Cruz (*H. H. Smith*), Jalapa (*Höge*), Omealca and Cuesta de Misantla (*M. Trujillo*), Orizaba (*H. H. Smith & F. D. G.*), Acaguizotla, Chilpancingo, Omilteme, Rincon, Tierra Colorada, and Xucumanatlan, all in Guerrero, Teapa in Tabasco (*H. H. Smith*); NICARAGUA, Chontales (*coll. Dist.*).

Hypselonotus atratus (p. 152).

To the localities given, add:—PANAMA (*Boucard*), Caldera, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Hypselonotus proximus (p. 153).

To the localities given, add:—PANAMA, Bugaba, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

SPHICTYRTUS (p. 153).

Sphictyrtus pretiosus (p. 153).

To the locality given, add :—MEXICO, Amula in Guerrero (*H. H. Smith*), Atoyac in Vera Cruz (*Schumann*).

Sphictyrtus intermedius (p. 153).

To the localities given, add :—PANAMA, Bugaba, Caldera (*Champion*).

Sphictyrtus longirostris (p. 154).

To the locality given, add :—MEXICO, Temax in North Yucatan (*Gaumer*); GUATEMALA, San Gerónimo (*Champion*).

The rostrum in this species is very fragile, and in most specimens examined I have found it more or less mutilated.

Var. a. Corium—excluding base, lateral, and claval margins—purplish-brown; femora ochraceous.

Hab. MEXICO, Tepic in Jalisco (*Schumann*).

In all forms of the species the abdomen above is reddish-ochraceous, with the segmental margins black.

4. **Sphictyrtus bugabensis,** n. sp. (Tab. XXXIII. fig. 15.)

Pronotum, scutellum, and corium very dark green, membrane black; head—above and beneath—anterior, lateral, and posterior margins of pronotum reddish-ochraceous; sternum and abdomen beneath ochraceous; a large subquadrate spot between the eyes, antennæ, legs, a large irregular spot on each lateral area of pro-, meso-, and metasternum extending to base of coxæ, rostrum, segmental margins to abdomen, upper surface of abdomen, and connexivum black or bluish-black. Pronotum very coarsely punctate, the disk subrugulose, scutellum transversely wrinkled, corium very finely punctate. (Rostrum apparently mutilated.)

Long. 22 millim.

Hab. PANAMA, Bugaba (*Champion*).

By its size and general appearance this species is allied to *S. longirostris*, Dist., from which it is separated by the different colour of the abdomen above and of the lateral margins of the pronotum, and by the different markings to the sternum. By the colour of the dorsal surface of the abdomen it is allied to *S. sumptuosus*, Stål, but here again its much larger size and the colour of the margins of the pronotum will at once distinguish it.

A single specimen was obtained by Mr. Champion.

PARYPHES (p. 154).

Paryphes flavo-cinctus (p. 154).

To the localities given, add:—COSTA RICA, R. Sucio (*Rogers*); PANAMA, Bugaba, Tolé (*Champion*).

SAVIUS (p. 155).

Savius dilectus (p. 155).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*H. H. Smith*); PANAMA, David (*Champion*).

Savius jurgiosus (p. 155).

To the localities given, add:—MEXICO, Valladolid and Temax in Yucatan (*Gaumer*).

HYALYMENUS (p. 156).

Hyalymenus pulcher (p. 156).

To the locality given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*); PANAMA, Bugaba, Tolé (*Champion*).

In some varieties of this species the black sternal markings are absent, in several the posterior tibiæ are only black at the base and apex, in others the body is fuscous both above and beneath.

Hyalymenus tarsatus (p. 156).

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa, Ventanas in Durango (*Forrer*), Tepic in Jalisco (*Schumann*), Atoyac (*H. H. Smith & Schumann*), Jalapa (*Höge*), Omealca (*M. Trujillo*), Medellin near Vera Cruz (*H. H. Smith*), Cordova (*Rümeli*), Acapulco, Dos Arroyos and Venta de Zopilote, all in Guerrero, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); NICARAGUA, Chontales (*Janson*); COSTA RICA (*Van Patten*); PANAMA, Bugaba, David, Caldera, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

ALYDUS (p. 157).

Alydus eurinus (p. 157).

To the localities given, add:—MEXICO, Ciudad in Durango (*Forrer*), Orizaba (*H. H. Smith & F. D. G.*), Omilteme and Xucumanatlan in Guerrero (*H. H. Smith*).

Alydus femoralis (p. 158).

To the localities given, add:—Mexico, Atoyac in Vera Cruz, Amula, Chilpancingo, Dos Arroyos and Xautipa, all in Guerrero (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); Panama, Bugaba, David, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This species appears to be better placed in the subgenus *Burtinus*, Stål, than in the subgenus *Megalotomus*, Fieb., where I previously located it (*anteà*, p. 158). The length of the posterior femora places it in Stål's division, but the antennæ are divergent, as in many specimens the fourth joint is shorter than the second and third together.

3. **Alydus pallescens.**

Alydus pallescens, Stål, Rio Jan. Hem. i. p. 24. 1 [1].
Alydus (*Megalotomus*) *pallescens*, Stål, En. Hem. i. p. 214. 5 [2]; Berg, Hem. Argent. p. 89. 112 [3].

Hab. Mexico, Temax in North Yucatan (*Gaumer*); Panama, Bugaba (*Champion*).—Antilles (*coll. Dist.*), Cuba [2]; Colombia [2]; Brazil, Rio Janeiro [1 2] (*coll. Dist.*); Argentine Republic [3].

This species exhibits a great constancy of form and colour in all parts of its extended habitat.

4. **Alydus notatipennis.**

Burtinus notatipennis, Stål, Öfv. Vet. Ak. Förh. 1859, p. 459. 1 [1].
Alydus (*Burtinus*) *notatipennis*, Stål, En. Hem. i. p. 214. 6 [2].

Hab. Mexico [1 2].—Colombia [1], Bogota [2].

In many respects the description of this species resembles that of my *A. femoralis*, but in a long series of specimens, the material on which I founded that species, I can discover no trace of the "corii macula longe pone medium pallidis" which Stål refers to in his diagnosis of *A. notatipennis*.

TRACHELIUM (p. 159).

Trachelium albo-apicatus (p. 159).

To the locality given, add:—Mexico, Atoyac in Vera Cruz (*H. H. Smith*); Guatemala, Tamahu (*Champion*); Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

2. **Trachelium tessellatus,** n. sp. (Tab. XXXIII. fig. 23.)

Castaneous or blackish. Antennæ unicolorous, fourth joint longest, third a little shorter than second. Corium with some central pale greyish tessellate markings, the apical margin levigate greyish-white, with the apex black. Underside of body concolorous, the head, sternum, and apical half of abdomen darkest or shining black; basal margin of head, coxal spots, and a discal transverse fascia to the abdomen pale

luteous or greyish. The pronotum is coarsely punctate, subrugulose, and with a central raised longitudinal levigate line; lateral spines slender, suberect and recurved backwardly; scutellum coarsely but sparsely punctate, apical spine long, erect, slender, slightly directed backwardly, and with its base pale greyish; corium sparingly punctate, the clavus thickly punctate; membrane with a small greyish spot at base, and with the apical margin paler; connexivum concolorous, with pale quadrate spots.
Long. 10 millim.

Hab. PANAMA, David, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Allied to *T. albo-apicatus*, Dist., but differing by the unicolorous antennæ, the tessellated corium, &c.

CYDAMUS (p. 159).

Cydamus borealis (p. 159).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*).

2. **Cydamus inauratus,** n. sp. (Tab. XXXIII. fig. 24.)

Dark bronzy brown or black; a central longitudinal fascia to head, two spots near the antenniferous tubercles, lateral margins of head and inner margins of eyes, the anterior lateral areas of the pronotum, apex of the scutellum, the lateral and part of the apical margins of the corium, with a straight discal fascia connecting the base of the first with the apex of the second, anterior margin of the pro-, meso-, and metasternum, coxal spots, and the rostrum (excluding basal joint and apex) pale ochraceous. The tibiæ are dull ochraceous, closely annulated with dark fuscous. The antennæ have the bases of the joints very narrowly and obscurely ochraceous, the basal joint passes the apex of the head, the first and second joints are subequal in length, the third shortest and the fourth longest; the two spines at the base of the pronotum are slender and erect, with their apices slightly recurved; the spine at the apex of the scutellum is distinctly directed backwardly and has its base ochraceous. (Carded specimens.)
Long. 8–9 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet, Peña Blanca (*Champion*).

3. **Cydamus deauratus,** n. sp. (Tab. XXXIII. fig. 25.)

Bronzy-black; three slender fasciæ on the apical third of the head, anterior half of pronotum, apex of the scutellum, corium, anterior margin of prosternum, coxal spots, and basal half of abdomen (obliquely) ochraceous; tibiæ ochraceous, closely annulated with fuscous. Antennæ with the basal joint about reaching the apex of the head, the second joint considerably longer than the first and a little longer than the third; pronotal spines distinctly recurved; apical spine to scutellum distinctly directed backwardly, with its base ochraceous. (Carded specimens.)
Long. 7 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet, Peña Blanca (*Champion*).

PROTENOR (p. 160).

Protenor tropicalis (p. 160).

To the locality given, add:—GUATEMALA, Purula (*Champion*).

DARMISTUS (p. 160).

Darmistus subvittatus (p. 160).

To the locality given, add:—MEXICO, Ciudad in Durango (*Forrer*), Cuernavaca in Morelos, Fortin in Vera Cruz (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*), Amula, Chilpancingo, Hacienda de la Imagen, Omilteme, Tepetlapa and Xucumanatlan, all in Guerrero (*H. H. Smith*); GUATEMALA, San Gerónimo and Volcan de Agua (*Champion*).

LYRNESSUS (p. 161).

Lyrnessus geniculatus (p. 161).

To the localities given, add:—PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

LEPTOCORISA (p. 161).

Leptocorisa filiformis (p. 161).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz, Acaguizotla, Dos Arroyos, R. Papagaio and Tepetlapa, all in Guerrero, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); PANAMA, Bugaba (*Champion*).

JALYSUS (p. 162).

Jalysus mollitus (p. 163).

To the localities given, add:—MEXICO, Cuernavaca in Morelos, Atoyac and Fortin in Vera Cruz, Amula, Chilpancingo, Venta de Pelegrino, and Xucumanatlan in Guerrero, Teapa in Tabasco (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*), San Lorenzo near Cordova (*M. Trujillo*); GUATEMALA, near the city, San Gerónimo, San Juan in Vera Paz (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 3000 to 6000 feet, San Feliz, Taboga Island, and San Miguel in the Pearl Islands (*Champion*).

In a long series now before me I find the species to be still more variable than I formerly supposed. In length it varies from 6 to $7\frac{1}{2}$ millim.; the pronotum is more often concolorous than in the typical Guatemalan specimens described; and in some examples the legs are unicolorous and not speckled with fuscous. By this last character it approaches the *J. spinosus*, Say, a Nearctic species.

2. **Jalysus tenellus.**

Metacanthus tenellus, Stål, Freg. Eug. Resa, Ins. Hem. p. 236. 42[1].

Jalysus tenellus, Stål, Rio Jan. Hem. ii. p. 60; Dist. Compt. Rend. Soc. Ent. Belg. xxxii. p. xi[2].

Hab. MEXICO, Cuernavaca in Morelos, Chilpancingo in Guerrero (*H. H. Smith*);

Panama, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*):—Ecuador, Puna I. Gulf of Guayaquil [1]; Brazil, Rio Janeiro (*coll. Dist.*); La Plata, Entre Rios [2] (*Bruss. Mus.*).

The specimen described by Stål was in bad condition:—"Specimen captum in spiritu asservatum, non bonum, quare descriptionem ampliorem dare nequo" [1]. With one exception, all the specimens examined have the head black, a character not mentioned by Stål; but as they come from a wide area, extending from Mexico in the north to Entre Rios in the south, and agree specifically in a perfect manner among themselves and generally well with Stål's description of his badly-preserved type, I naturally refrain from describing another species. Moreover, one of the specimens from Entre Rios in the Brussels Museum has the head pale castaneous. There is no doubt, judging from my own experience, that the genus *Jalysus* is most variable in its species when the described forms are examined with ample material, and that it at present exists in some amount of specific uncertainty—another welcome testimony to the truth of evolutionary principles.

PARAJALYSUS (p. 163).

Parajalysus spinosus (p. 163).

To the localities given, add:—Guatemala, Panzos in Vera Paz (*Champion*); Panama, Bugaba (*Champion*).—Brazil, Rio Janeiro, Santa Cruz (*Van Volxem in Bruss. Mus.*).

HARMOSTES (p. 166).

Harmostes serratus (p. 166).

To the localities given, add:—Mexico, Atoyac in Vera Cruz (*Schumann*); Panama, Bugaba, Caldera, Volcan de Chiriqui 3500 to 4000 feet (*Champion*).

Harmostes nebulosus (p. 166).

To the localities given, add:—Mexico, Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*), Amula, Venta de Zopilote and Xucumanatlan, all in Guerrero, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*).

Var. *a*. Smaller, measuring only 7 millim. as against 9 millim. in typical specimens. The corium is usually distinctly darker in hue towards the apical margin.

Hab. Mexico, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

I possess a Mexican specimen of this variety labelled in Stål's handwriting *H. dorsalis*, Stål, which evidently refers to the *H. dorsalis*, Burm.; but as the description of Burmeister's species (apparently at present unrecognized) distinctly states "pectore linea laterali fusca," it cannot be thus ascribed.

Harmostes subrufus (p. 167).

To the locality given, add:—MEXICO, Venta de Zopilote in Guerrero (*H. H. Smith*).

Harmostes fraterculus (p. 168).

To the localities given, add:—MEXICO, Orizaba (*H. H. Smith & F. D. G.*); GUATEMALA, Chiacam (*Champion*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet, Peña Blanca (*Champion*).

AUFEIUS (p. 168).

Aufeius impressicollis (p. 169).

To the localities given, add:—MEXICO, in the city (*H. H. Smith*), Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*); GUATEMALA, San Gerónimo (*Champion*).

CORIZUS (p. 169).

Corizus hyalinus (p. 169).

To the localities given, add:—MEXICO, in the city (*H. H. Smith*), Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*).

Corizus punctatus (p. 170).

To the localities given, add:—MEXICO, Ciudad in Durango (*Forrer*), Guajuco in Nuevo Leon (*Dr. Palmer*), Omilteme and Venta de Zopilote in Guerrero, Mexico city, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Chacoj in Vera Paz, Guatemala city, Quezaltenango, Quiché Mts. (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Volcan de Chiriqui 2500 to 6000 feet, Tolé (*Champion*).

In some of the Panama specimens, which I cannot otherwise separate from *C. punctatus*, the pronotum is marked by three distinct ochraceous longitudinal fasciæ, and the scutellum is also streaked with the same colour; but in a variable species, now studied by the aid of more than a hundred specimens, colour-varieties are not uncommon. It can always be separated from the following species (*C. lateralis*) by its broader and less elongate form.

Corizus lateralis (p. 170).

To the localities given, add:—MEXICO, Xucumanatlan in Guerrero, Cuernavaca in Morelos, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*); GUATEMALA, in the city, Chacoj, San Joaquin and Senahu in Vera Paz (*Champion*); COSTA RICA, Caché (*Rogers*); PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet, David (*Champion*).

Corizus pictipes (p. 171).

To the localities given, add:—MEXICO, Monclova in Coahuila (*Dr. Palmer*), Presidio de Mazatlan in Sinaloa, Ciudad in Durango (*Forrer*), Cuernavaca in Morelos, Atoyac in Vera Cruz, Amula, Chilpancingo, Dos Arroyos, Omilteme, Tepetlapa and Xucumanatlan in Guerrero, Frontera and Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); GUATEMALA, El Reposo, Quezaltenango, Quiché Mts. (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet, Los Remedios, Peña Blanca, San Miguel in the Pearl Islands (*Champion*).

Corizus ventralis (p. 171).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*).

JADERA (p. 172).

Jadera obscura (p. 172).

To the localities given, add:—PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Jadera hæmatoloma (p. 173).

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa, Tres Marias Is. (*Forrer*), San Blas in Jalisco (*Richardson*), Pinos Altos in Chihuahua (*Buchan-Hepburn*), Chilpancingo, Omilteme, and Xucumanatlan, in Guerrero (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*); GUATEMALA, El Reposo, Capetillo (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet, Tolé (*Champion*).

Jadera æola (p. 173).

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*), Temax and Valladolid in Yucatan (*Gaumer*); GUATEMALA, Capetillo (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Most of the specimens from the State of Panama are darker in hue than the examples received from Guatemala and Mexico.

ONCOPELTUS (p. 174).

Oncopeltus gutta (p. 174).

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*), Tepic in Jalisco (*Schumann*), Dos Arroyos, La Venta, Omilteme, R. Papagaio, and

Venta de Zopilote, all in Guerrero (*H. H. Smith*); GUATEMALA, San Gerónimo, Capetillo (*Champion*).

Oncopeltus sexmaculatus (p. 174).

To the localities given, add:—MEXICO, Jalapa in Vera Cruz (*Höge*), Temax in North Yucatan (*Gaumer*).

Oncopeltus varicolor (p. 174).

To the localities given, add:—MEXICO, Cuesta de Misantla in Vera Cruz (*M. Trujillo*), Atoyac in Vera Cruz (*Schumann*); GUATEMALA, Cerro Zunil (*Champion*).

Oncopeltus cingulifer (p. 175).

To the localities given, add:—MEXICO, Presidio de Mazatlan (*Forrer*), San Blas in Jalisco (*Richardson*), Cuesta de Misantla in Vera Cruz (*M. Trujillo*), Atoyac in Vera Cruz, Cuernavaca in Morelos, Chilpancingo in Guerrero, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); GUATEMALA, Zapote (*Champion*); HONDURAS, Ruatan I. (*Gaumer*); NICARAGUA, Chontales (*Janson*); PANAMA (*Boucard*), Bugaba (*Champion*).

Oncopeltus sandarachatus (p. 176).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz, Tepetlapa in Guerrero, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); HONDURAS, Ruatan I. (*Gaumer*).

Oncopeltus fasciatus (p. 176).

To the localities given, add:—MEXICO, Ciudad in Durango (*Forrer*), Cuernavaca in Morelos, Amula, Chilpancingo and Xucumanatlan in Guerrero (*H. H. Smith*); PANAMA, Bugaba (*Champion*).

LYGÆUS (p. 177).

Lygæus costalis (p. 178).

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa, Milpas and Ventanas in Durango (*Forrer*), Villa Lerdo in Durango (*Höge*), Pinos Altos in Chihuahua (*Buchan-Hepburn*), San Luis Potosi (*Dr. Palmer*), Cuernavaca in Morelos, Atoyac in Vera Cruz, Amula, Omilteme and Xucumanatlan in Guerrero (*H. H. Smith*); GUATEMALA, in the city, San Gerónimo (*Champion*); COSTA RICA (*Van Patten*).

From the examination of a very long series of specimens which have accumulated since the species were formerly enumerated in this work, I am still more convinced

that *L. costalis*, H.-S., *L. reclinatus*, Say, and *L. kalmii*, Stål, will prove to be varieties of but one species, and probably of *L. turcicus*, Fabr.

Lygæus kalmii (p. 178).

To the localities given, add:—Mexico, Temax in North Yucatan (*Gaumer*).

Lygæus ruficeps (p. 179).

To the localities given, add:—Mexico, Presidio de Mazatlan in Sinaloa (*Forrer*); Guatemala, Dueñas (*Champion*).

Lygæus truculentus (p. 179).

To the localities given, add:—Mexico, Temax in North Yucatan (*Gaumer*); Guatemala, Capetillo (*Champion*); Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Lygæus formosus (p. 180).

To the localities given, add:—Mexico, Presidio de Mazatlan in Sinaloa (*Forrer*), San Lorenzo near Cordova (*M. Trujillo*), Atoyac in Vera Cruz, Tepetlapa and Venta de Zopilote in Guerrero (*H. H. Smith*); Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Lygæus bicolor (p. 180).

To the localities given, add:—Mexico, Ciudad in Durango (*Forrer*), Chilpancingo in Guerrero (*H. H. Smith*).

Lygæus bistriangularis (p. 180).

To the localities given, add:—Mexico, Ciudad in Durango (*Forrer*), Cuernavaca in Morelos (*F. D. G.*), Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*), Atoyac in Vera Cruz, Amula in Guerrero, and Teapa in Tabasco (*H. H. Smith*), San Lorenzo near Cordova (*M. Trujillo*); Guatemala, Capetillo, San Joaquin in Vera Paz (*Champion*); Panama, Volcan de Chiriqui 4000 feet, Bugaba (*Champion*).

9 (a). **Lygæus albulus,** n. sp. (Tab. XXXIV. fig. 2.)

Black; margins and a central fascia—broadest at base, and not reaching anterior margin—to pronotum, apex of scutellum, clavus, and corium dull reddish; apical margin of the corium, apical margin and a discal spot to membrane, greyish-white. The body above is distinctly pilose; the scutellum has a central carination; the veins to the corium are somewhat prominent and darker in hue.

Long. 5 millim.

Hab. Guatemala, Quiché Mts. (*Champion*).

Mr. Champion obtained two specimens of this very distinct species. The grey

discal spot to the membrane separates *L. albulus* from *L. bistriangularis*, Say, which in size and general appearance it somewhat resembles.

Lygæus uhleri (p. 181).

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*), Tepetlapa in Guerrero (*H. H. Smith*); GUATEMALA, San Joaquin in Vera Paz (*Champion*); PANAMA, Bugaba, David (*Champion*).

Lygæus dispar (p. 182).

To the localities given, add:—PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Lygæus pulchellus (p. 183).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann*), San Lorenzo near Cordova (*M. Trujillo*), Acapulco in Guerrero, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*).

Lygæus pallido-cinctus (p. 183).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann*), San Lorenzo near Cordova (*M. Trujillo*); GUATEMALA, San Gerónimo (*Champion*); NICARAGUA, Chontales (*Janson*).

19 (A). **Lygæus chontalensis,** n. sp.

Allied to *L. conjunctus*, Dist., but smaller; pronotum narrower and less widened posteriorly; corium with the veins distinctly dull ochraceous; antennæ with the second and third joints subequal in length, and not with the second joint distinctly longer than the third, as in *L. conjunctus*. The pronotum has also two obscure dull ochraceous submarginal fasciæ on its basal half.

Long. 4 millim.

Hab. NICARAGUA, Chontales (*Janson*).

Two specimens of this species have been examined.

Lygæus pallescens (p. 183).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

21 (A). **Lygæus calderensis,** n. sp.

Allied to *L. interstinctus*, Dist., but larger; head with a broad central longitudinal blackish fascia; pronotum with the anterior half considerably excavated, and in some specimens with a transverse ochraceous fascia; scutellum with a distinct, strongly carinate, and somewhat cruciform elevation. Antennæ with the second and third joints much longer than in *L. interstinctus*, the third joint distinctly ochraceous at apex.

Long. 6–7 millim.

Hab. PANAMA, Caldera (*Champion*).

This insect has the apex of the membrane broadly pale greyish, thus resembling the species of the genus *Acroleucus*.

Lygæus cruentatus (p. 184).

To the locality given, add :—? BRAZIL, Santa Cruz (*Bruss. Mus.*).

Lygæus venosus (p. 184).

To the localities given, add :—MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*), San Lorenzo near Cordova (*M. Trujillo*), Teapa in Tabasco (*H. H. Smith*) ; BRITISH HONDURAS, Belize (*Gaumer*) ; PANAMA, David (*Champion*).

23 (A). **Lygæus teapensis,** n. sp. (Tab. XXXIV. fig. 1.)

Head red ; eyes, ocelli, a broad central longitudinal fascia extending from the centre of the disk to the apex, antennæ, and rostrum black. Pronotum ochraceous, with two broad central fuscous fasciæ, not reaching the anterior margin, notched near apex and outwardly widened at base. Scutellum fuscous, with a central ochraceous fascia. Corium fuscous, the margins, veins, and claval margins ochraceous. Membrane pale fuscous, with the veins black. Body beneath (excluding head) ochraceous ; prosternum with two transverse pale fuscous streaks on each lateral area, inner lateral and posterior margins of meso- and metasternum pale fuscous ; abdominal basal segmental margins red ; legs castaneous or pale fuscous ; tarsi, and sometimes the tibiæ, blackish.

Long. 9–11 millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

This is another species belonging to the group centred round the Cuban *L. poeyi*, Guér. The red head is a peculiar feature of the species here described. Several specimens were obtained by Mr. Smith.

Lygæus verecundus (p. 185).

To the locality given, add :—MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

This species was only known to us by a single specimen obtained in Guatemala by Mr. Champion ; another example has since been sent by Mr. Smith from Mexico.

Lygæus nigrinervis (p. 185).

To the localities given, add :—MEXICO, Omilteme in Guerrero (*H. H. Smith*).

A single specimen sent us by Mr. Smith is paler in hue than the one here figured (Tab. XVIII. fig. 7).

Lygæus bicrucis (p. 185).

To the localities given, add :—MEXICO, Cuernavaca in Morelos, Chilpancingo in

Guerrero (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); British Honduras, R. Hondo (*Blancaneaux*); Panama, Volcan de Chiriqui 2000 to 6000 feet (*Champion*).

Lygæus nigriguttulus (p. 186).

Var. *a*. Pronotum with two foliaceous fasciæ connecting the discal and basal spots.

Hab. Mexico, Omilteme and Rincon in Guerrero (*H. H. Smith*).

We have received two examples of this variety.

Lygæus circumlitus (p. 186).

To the localities given, add:—Mexico, Cuernavaca in Morelos (*H. H. Smith*); Panama, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Lygæus circumplicatus (p. 186).

Var. *a*. Larger than typical specimens described, measuring nearly 7 millim.; apical claval margin and apical margin to corium concolorous, not ochraceous; abdomen beneath more or less fuscous.

Hab. Mexico, Temax in North Yucatan (*Gaumer*).

Lygæus rubriger (p. 187).

To the localities given, add:—Mexico, Milpas in Durango (*Forrer*).

Lygæus vittiscutis (p. 187).

To the localities given, add:—Mexico, Tepetlapa in Guerrero (*H. H. Smith*).

ACROLEUCUS (p. 188).

1 (a). **Acroleucus vittaticeps.**

Acroleucus vittaticeps, Stål, En. Hem. iv. p. 114. 3[1].

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*). — Colombia, Bogota[1]; Venezuela, Caracas (*coll. Dist.*).

1 (b). **Acroleucus nigellus,** n. sp. (Tab. XXXIV. fig. 3.)

Reddish ochraceous; antennæ, eyes, apex and a broad central longitudinal fascia to head, the last continued across the pronotum and widened posteriorly, scutellum, membrane, legs, and body beneath black; apical margin of membrane pale greyish; trochanters and bases of femora luteous.

Long. 7–8 millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).—Colombia, near Bogota (*coll. Dist.*).

This species is allied to *A. nigro-vittatus*, Stål, from which it differs by the black scutellum, the unicolorous corium, and the considerably broader pronotum.

1 (c). **Acroleucus sceleratus,** n. sp. (Tab. XXXIV. fig. 4.)

Black; head, pronotum, and scutellum dull reddish; apex of head, eyes, central basal margin of pronotum and two central transverse spots near its anterior margin, and the base of the scutellum, black; lateral margins of the corium very obscure dull reddish; apex of membrane very broadly brownish-grey. (Carded specimen.)

Long. 8 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 feet (*Champion*).

This species is allied to *A. subniger*, Dist., from which it is at once separated by the colour of the body beneath; the corium and antennæ are also unicolorous.

A single example only has been received.

1 (d). **Acroleucus rubefactus,** n. sp. (Tab. XXXIV. fig. 5.)

Dull reddish; apex of head, eyes, antennæ, base, basal angles and half of lateral margins to scutellum, membrane, body beneath, and legs black; apex of membrane broadly brownish-grey. The scutellum is distinctly carinate in a somewhat cruciform manner. Trochanters and bases of femora apparently luteous. (Carded specimen.)

Long. 8 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 feet (*Champion*).

A single example only is in our collection.

1 (e). **Acroleucus delineatus,** n. sp. (Tab. XXXIV. fig. 6.)

Dull reddish and somewhat greyishly pubescent; antennæ ochraceous, the fourth joint and the apices of the second and third joints black; an obscure central fascia to head, two central fasciæ to pronotum, and scutellum black. Membrane ochraceous, its apical margin greyish-white, irregularly spotted with black on the disk, and with two contiguous spots near apex. Body beneath pale reddish, sternum infuscated, legs castaneous; trochanters invisible. (Carded specimen.)

Long. 7 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 feet (*Champion*).

This peculiarly marked species is also to be recognized by the concavely sinuated lateral margins of the pronotum. Like the preceding, it is only represented in our collection by a single specimen.

Acroleucus brevicollis (p. 189).

To the locality given, add:—PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

The specimens from the State of Panama are more obscurely coloured than the Mexican type of Stål which is here figured (Tab. XVII. fig. 15). *A. brevicollis* is scarcely separable, save by size, from the species described by the same author as *A. tullus*, and specimens of both have now been received from the State of Panama and from the same locality. Size, and the brightness of the posterior margin of the pronotum, can almost alone be used as discriminating characters.

NICUESA, gen. nov. (To follow the genus *Acroleucus*, p. 189.)

Head short, deflexed, eyes very prominent and inserted at base; ocelli wide apart; antennæ with the basal joint short and incrassated, second and third joints slender, fourth somewhat thickened. Pronotum with the disk sculptured, irregularly carinate, the posterior margin distinctly sinuate, the anterior margin slightly concavely sinuate, the lateral angles rounded. Scutellum triangularly carinate at a short distance from apex. Femora unarmed.

The peculiar structure of the pronotum at once distinguishes this genus.

1. **Nicuesa speciosus,** n. sp. (Tab. XXXIV. fig. 7.)

Black; pronotum and prosternum red; lateral margins of the corium stramineous; apical margins of the membrane narrowly greyish. Antennæ moderately pilose, the second and fourth joints subequal in length. Pronotum reticulately carinate, forming two distinct cells near base.

Long. 6–7 millim.

Hab. PANAMA, Bugaba (*Champion*).

NYSIUS (p. 190).

2. **Nysius (?) monticola,** n. sp. (Tab. XXXIV. fig. 8.)

Head and pronotum ochraceous, thickly punctured with fuscous; lateral margins of the head, continued on inner side of eyes to base, black; antennæ blackish, in one specimen with the second joint (excluding apex) a little paler; pronotum with the anterior area blackish; scutellum black, with its extreme apex ochraceous; corium pale ochraceous, inwardly pale fuscous, with a lateral submarginal series of small brown spots, the apical margin black, broken with ochraceous; membrane pale hyaline shaded with brownish and showing the dark abdomen beneath. Body beneath black; legs ochraceous, the femora (excluding apices) and the tarsi castaneous. The head, pronotum, and scutellum are coarsely punctate; the antennæ have the second joint longer than the third, which is also shorter than the fourth.

Long. $3\frac{1}{2}$–4 millim.

Hab. GUATEMALA, Volcan de Agua 8000 to 10,500 feet (*Champion*).

Two specimens have been received of this species, which differs from the typical forms of the genus by having the fourth joint of the antennæ a little longer than the third.

3. **Nysius (?) ementitus,** n. sp. (Tab. XXXIV. fig. 9.)

Pale ochraceous; eyes, apical joint of antennæ, inner margins of eyes, anterior broken fascia to pronotum, scutellum, and femora (excluding apices) castaneous or blackish. Scutellum with an anterior fascia and the apex ochraceous; apical margin of the corium narrowly blackish. Membrane pale hyaline, with an apical pale fuscous spot, and showing the dark abdomen beneath. The head, pronotum, and scutellum are coarsely punctate. The second joint of the antennæ is very slightly longer than the third, which is about subequal in length to the fourth.

Long. 4 millim.

Hab. GUATEMALA, Quezaltenango, Cerro Zunil, Dueñas, Aceituno (*Champion*).

In some specimens (probably discoloured) the colour above is pale fuscous in place of pale ochraceous. The species differs from the typical forms of the genus by having the pronotum broader and less gibbous, with the lateral margins more oblique. We have received many examples.

BELONOCHILUS. (To follow the genus *Nysius*, p. 190.)

Belonochilus, Uhler, Proc. Bost. Soc. Nat. Hist. xiv. p. 104 (1871).

The elongate body and the long head, which with the pronotum forms "a long triangle," will almost alone separate this genus. It previously contained but one species, the *Lygæus numenius*, Say, a North-American insect. I now add a second ecies from Mexico.

1. **Belonochilus mexicanus**, n. sp. (Tab. XXXIV. fig. 10.)

Ochraceous, punctured with brown. Antennæ ochraceous, with the apical joint pale castaneous. Eyes, ocelli, scutellum, apical area of corium, and spots to connexivum castaneous; a central pale levigate fascia traverses the head, pronotum, and scutellum; membrane pale fuscous, with darker shadings. Body beneath and legs ochraceous. The pronotum and scutellum are coarsely punctate, the corium is very obscurely and finely pilose; the antennæ have the second joint longest, the third and fourth about equal in length. The anterior area of the pronotum is provided with two transverse callosities; the lateral pronotal angles are subprominent and slightly directed backwardly.

Long. 5–6 millim.

Hab. Mexico, Orizaba (*H. H. Smith & F. D. G.*).

The discoverers of this species procured a good series of specimens. It differs from *B. numenius* (Say) by the rostrum only extending over three-fourths the length of the abdomen.

NINUS (p. 191).

Ninus notabilis (p. 191).

To the locality given, add:—Panama, Bugaba, Peña Blanca (*Champion*).

NEONINUS (p. 192).

Neoninus illustris (p. 192).

To the localities given, add:—Mexico, Teapa in Tabasco (*H. H. Smith*); Panama, Bugaba, Volcan de Chiriqui 2500 to 4000 feet, San Miguel in the Pearl Islands (*Champion*).

ISCHNORHYNCHUS (p. 192).

Ischnorhynchus resedæ (p. 193).

To the localities given, add:—Guatemala, San Gerónimo (*Champion*).

1 (a). **Ischnorhynchus punctatus**, n. sp. (Tab. XXXIV. fig. 11.)

Ochraceous, clouded with fuscous. Antennæ ochraceous, basal joint castaneous with the apex black, bases and apices of second and third joints and apical joint (excluding base) black. Scutellum with the apical half reddish, basal area ochraceous, punctured with black. Corium, excluding lateral margins, clouded with fuscous, with a transverse discal spot and the apex blackish; the clavus and sublateral areas very coarsely punctate. Membrane pale fuscous hyaline, with a basal black area enclosing a reddish spot. Body beneath (carded specimen) with the sternum ochraceous, coarsely punctured with black, and the abdomen castaneous. Legs castaneous, with the apices of the femora and the apical halves of the tibiæ ochraceous.

Long. 4 millim.

Hab. PANAMA, Caldera (*Champion*).

This species is allied to *I. resedæ*, but apart from other differences has a broader and more ovate form. We have received several examples.

Ischnorhynchus championi (p. 193).

To the localities given, add :—GUATEMALA, Quezaltenango, Zapote, Guatemala city, Capetillo (*Champion*).

2 (A). **Ischnorhynchus thoracicus,** n. sp. (Tab. XXXIV. fig. 12.)

Pale cinereous; head dark cinereous; pronotum with a transverse fascia across the anterior area, and four subquadrate spots across the basal area (of which the central two are largest), dark cinereous. Scutellum variable in colour, sometimes piceous with the disk reddish, or wholly piceous with pale spots at the basal angles and apex. Clavus and interior area of corium dark cinereous; two central spots on disk and four on apical margin of corium fuscous; membrane pale hyaline. Legs castaneous, apices of the femora pale ochraceous. Antennæ ochraceous, basal joint, apices of second and third joints, and fourth joint (excluding base) dark castaneous. Pronotum, scutellum, and clavus very coarsely punctate.

Long. 3 millim.

Hab. GUATEMALA, Quezaltenango 7500 feet (*Champion*).

Three examples.

IMBRIUS. (To follow the genus *Ischnorhynchus*, p. 194.)

Imbrius, Stål, En. Hem. iv. p. 124 (1874).

A genus to be distinguished from *Ischnorhynchus* by the shorter corium, the apical angles of which do not reach the apex of the abdomen, and by the carinate lateral margins of the pronotum.

One species only has been described, and this appears to be found commonly in our fauna.

1: **Imbrius ferruginosus.**

Imbrius ferruginosus, Stål, En. Hem. iv. p. 125. 1 [1].

Hab. GUATEMALA, Volcan de Agua (*Champion*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).—COLOMBIA, Bogota [1].

In some varieties of this species the corium is without the black discal fascia, and the apex is also concolorous. The scutellum is either wholly black, marked with black only, or ochraceous.

We have received numerous examples which appear to agree fairly well with Stål's description.

MAYANA, gen. nov. (To follow the genus *Imbrius.*)

Differs from both *Ischnorhynchus* and *Imbrius* by the more elongate body and by the pronotum being distinctly constricted at centre, the anterior and posterior lobes being

of about equal breadth. Allied to *Imbrius* by having the corium shorter than the abdomen, by the truncate posterior margin of the pronotum, and by the distinctly carinate lateral margins of the pronotum. The head is a little longer than broad. (Carded specimens prevent further diagnosis.)

1. **Mayana costata,** n. sp. (Tab. XXXIV. fig. 13.)

Ochraceous shaded with fuscous; corium with the lateral margins spotted with fuscous; basal margin and apex of scutellum and apical angle of corium black; membrane greyish hyaline, showing the dark upper surface of the abdomen. Body beneath black; legs ochraceous, the femora (excluding apices) castaneous. The head, pronotum, scutellum, and clavus are coarsely punctate; the corium is more finely punctate on claval margin and disk, the lateral margins being impunctate. The antennæ are fuscous, the second and third joints being palest in hue.

Long. 3½ millim.

Hab. GUATEMALA, Quezaltenango, Guatemala city (*Champion*).

Three examples.

2. **Mayana dirupta,** n. sp.

Castaneous; corium pale stramineous, with about four castaneous discal lines; membrane pale hyaline, with the venation brownish. Body beneath blackish; femora dark castaneous, their apices and the tibiæ and tarsi ochraceous. Antennæ castaneous. Body above coarsely punctate.

Long. 3½ millim.

Hab. GUATEMALA, Quezaltenango 7500 feet (*Champion*).

This species is distinguished from the preceding, *M. costata*, not only by the colour differences, but also by having the corium coarsely punctate.

Several specimens were sent by Mr. Champion.

NINYAS (p. 194).

2. **Ninyas solubilis,** n. sp.

Closely allied to *N. strabo*, from which it differs by the antennæ being fuscous with the base only luteous; eyes darker and broader, a black spot at inner margins of eyes, scutellum with a discal cruciform levigate callosity, apical margins of the corium more broadly fuscous than in *N. strabo*, and with the body beneath black.

Long. 3½–4 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 6000 feet (*Champion*).

Five specimens have been received.

3. **Ninyas torvus,** n. sp. (Tab. XXXIV. fig. 14.)

Head and eyes bright coralline-red; pronotum pale shining ochraceous, with the disk and the posterior margin of the anterior transverse callosity coarsely and darkly punctate; scutellum black, with a pale luteous cruciform callosity occupying the whole of the disk; clavus, with the exception of the basal angles, blackish; corium pale shining ochraceous, its apical margins narrowly castaneous; membrane pale hyaline; antennæ brownish-ochraceous, the basal joint pale ochraceous. Body beneath and legs ochraceous, a large black spot at bases of intermediate and posterior coxæ.

Long. 4½ millim.

Hab. PANAMA, Bugaba (*Champion*).

Five specimens were obtained by Mr. Champion.

ENCISCOA, gen. nov. (To follow the genus *Ninyas*, p. 195.)

Eyes of moderate size, but extremely exserted and directed forwardly at right angles to each other. Antennæ with the basal joint long and slightly incrassated, third joint short, fourth incrassated. Pronotum with the posterior margin straight or very slightly convex; lateral angles either subprominent or strongly spinous; distinctly constricted near anterior margin, with a small nodule at each lateral margin. Corium with its apex not reaching apex of abdomen, its lateral margins emarginate near base, and then widened and ampliated to apex. Membrane passing the apex of the abdomen.

This genus is allied to *Ninyas*, from which it differs by the strongly exserted and angulated eyes, the structure of the pronotum, &c.

a. *Lateral angles of the pronotum subprominent.*

1. **Enciscoa inermis,** n. sp. (Tab. XXXIV. fig. 15.)

Pale shining ochraceous; eyes, two longitudinal fasciæ to head, extending over anterior portion of the pronotum, two central fasciæ on posterior half of pronotum, and two lateral spots to same, one near anterior constriction and one at lateral angles, two central fasciæ to scutellum, a large spot on clavus, a spot at anterior angle and another at apex of corium, and some small spots on membrane carmine-red. Body beneath and legs ochraceous; sternum and abdomen spotted with carmine (imperfectly seen owing to specimens being carded). The pronotum is very coarsely punctate.

Var. *a.* Almost unicolorous ochraceous, the carmine markings being nearly absent.

Long. 5 millim.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*); GUATEMALA, San Gerónimo (*Champion*); PANAMA, Bugaba (*Champion*).

We have altogether received seven examples of this species.

b. *Lateral angles of the pronotum spinous.*

2. **Enciscoa acuminatus,** n. sp. (Tab. XXXIV. fig. 16.)

Allied in size and coloration to the preceding species, but differing by the lateral angles of the pronotum being produced in long, slender, straight, acute spines; the abdomen above has also a broad central black fascia, which is seen distinctly through the membrane.

Long. $4\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

We only possess a single example of this species.

3. **Enciscoa mucronatus,** n. sp. (Tab. XXXIV. fig. 17.)

Ochraceous; apical joint of the antennæ and two central fasciæ to pronotum pale fuscous. The body is sparingly hirsute; the pronotum has two long spines on each side, one near anterior margin, the other at the posterior angle, both are slightly recurved and strongly hirsute, the first being the longest.

Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

A species to be recognized by its strongly hirsute character and by the double-spined pronotum. A single specimen is in our collection.

Division **CYMARIA.** (To precede the Subfam. *Blissinæ*, p. 195.)

Cymaria, Stål, En. Hem. iv. p. 123 (1874).

This section can be at once separated from the Division 'Ischnorhyncharia' of the Cyminæ by the claval characters "commissura scutello longiore."

CYMUS.

Cymus, Hahn, Wanz. Ins. i. p. 76 (1831); Fieber, Eur. Hem. pp. 52, 203 (1861); Stål, Öfv. Vet.-Ak. Förh. 1872, p. 44.

A genus of wide distribution, being already recorded from the Nearctic, Palæarctic, and Oriental Regions. It is now included in the Neotropical fauna.

1. **Cymus mexicanus,** n. sp. (Tab. XXXIV. fig. 18.)

Ochraceous; apical joint of antennæ, a narrow fascia on each side of head between the eyes, a sublateral fascia on each side of pronotum, scutellum (excluding central longitudinal fascia), and a sublateral and a discal streak to corium, pale castaneous; outer claval margin dark castaneous; lateral margins of the corium stramineous, with a fuscous spot at apex; membrane pale hyaline, with the base and central fascia pale castaneous. Sternum pale stramineous, its lateral margins, coxæ, and abdomen beneath pale castaneous; legs ochraceous, the basal halves of the femora castaneous. Antennæ with the basal joint scarcely passing the apex of the head, second joint shorter than the third, basal and apical joints incrassated. Head, pronotum, clavus, and corium coarsely punctate; a central pale levigate longitudinal carination extending through pronotum and scutellum; the pale lateral margins to corium impunctate.

Long. $4\frac{1}{2}$ millim.

Hab. MEXICO, San Pedro in Coahuila (*Dr. Palmer*), Mexico city (*H. H. Smith*).

A single specimen from each of the above localities has been received; that from San Pedro is much paler in hue than the type here described, which was taken by Mr. Smith.

2. **Cymus guatemalanus,** n. sp. (Tab. XXXIV. fig. 19.)

Pale stramineous; basal and apical joints of antennæ, eyes, a spot near apex of scutellum, another at claval apex, and a basal and an apical spot to corium, black; membrane pale hyaline, showing the dark abdomen beneath. (Body beneath and legs imperfectly seen, owing to specimens being carded.) The basal joint of the antennæ scarcely reaches the apex of the head, the second joint is shorter than the third, the basal and apical joints incrassated; the head and pronotum are somewhat coarsely punctate, the clavus and corium more thickly and finely punctate.

Long. 4 millim.

Hab. GUATEMALA, Quiché Mts. 8000 feet (*Champion*).

Two examples.

ISCHNODEMUS (p. 195).

Ischnodemus præcultus (p. 196).

To the locality given, add:—PANAMA, Caldera (*Champion*).

In the specimens from the State of Panama the corium and membrane are more or less shaded with dark fuscous. The length of the third joint of the antennæ is variable in specimens now before me.

3. **Ischnodemus cahabonensis,** n. sp. (Tab. XXXIV. fig. 20.)

Head, pronotum, and scutellum black; posterior margin of the pronotum, the corium, and membrane ochraceous; abdomen above castaneous, greyishly pilose, its lateral margins ochraceous. Femora black; their apices, the tibiæ, and the tarsi ochraceous, the apical joint of the tarsi black. Antennæ black, the basal joint and the eyes castaneous. Pronotum constricted behind middle, the anterior lobe wide, subglobose, and pilose, the constriction being broad and transversely striated. (In the specimen described the corium and membrane are in a rudimentary condition.)

Long. 7 millim.

Hab. GUATEMALA, Cahabon in Vera Paz (*Champion*).

By the colour of the legs this species is allied to *I. tibialis* and *I. nigro-stillatus*, Stål, described from Rio Janeiro, but it differs from both by the bi-coloured pronotum. A single example is all we have received.

4. **Ischnodemus umbratus,** n. sp. (Tab. XXXIV. fig. 21.)

Head, pronotum, scutellum, clavus, legs, and antennæ black; apices of the femora and tibiæ, and the tarsi, ochraceous. Corium ochraceous, with its inner area blackish; membrane fuscous, with the margins greyish. Abdomen above dark castaneous and greyishly pilose, its lateral margins obscure ochraceous.

Long. 6 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Allied to the preceding species, *I. cahabonensis*, but with the pronotum concolorous and its anterior lobe shorter; it also differs by the colour of the legs, corium, membrane, &c. As in our solitary example of the preceding species, the corium and membrane are in a rudimentary condition. Mr. Champion sent us a single (carded) specimen.

TOONGLASA, gen. nov. (To follow the genus *Ischnodemus*, p. 196.)

Lateral margins of the apical segment of the abdomen produced into a long curved spine on each side; legs short, the femora strongly incrassated; anterior femora with a very strong spine near apex. Head about as broad as long, triangularly produced in front of the eyes, and strongly constricted and moderately exserted behind them; narrower than the anterior margin of the pronotum; prominently spinous near the base of the antennæ. Antennæ with the basal joint short, globose, and about reaching the apex of the head, second joint a little longer than the third (remainder mutilated). Pronotum broad, with its lateral margins rounded anteriorly, the anterior margin concavely sinuate, and little more than half the breadth

of the posterior margin, strongly constricted about centre, with two small oblique callosities on anterior area and the lateral angles posteriorly produced. Scutellum broader than long, with an obscure central carination. Membrane not reaching the apex of the abdomen. (Characters of under surface not visible, owing to specimen being carded.)

1. **Toonglasa forficuloides,** n. sp. (Tab. XXXIV. fig. 22.)

Black; legs reddish-ochraceous; lateral margins of the corium pale ochraceous; lateral margins of the membrane greyish-white. Antennæ with the basal joint castaneous, the second and third joints blackish (remainder mutilated); head transversely wrinkled; posterior lobe of the pronotum, scutellum, and corium somewhat obscurely but coarsely punctate; uncovered portion of abdomen above castaneous, with the apical segment and spines black.

Long. excl. abd. spines, 10 millim.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

A single example of this remarkable insect has alone been received.

BLISSUS (p. 196).

Blissus leucopterus (p. 196).

To the localities given, add:—Mexico, Orizaba (*H. H. Smith*); Panama, Bugaba, San Feliz (*Champion*).

A large number of immature forms of this species were sent by Mr. Champion from the Volcan de Chiriqui, and from as high an altitude as 6000 feet.

GEOCORIS (p. 197).

Geocoris flavilineus (p. 198).

To the localities given, add:—Panama, Peña Blanca (*Champion*).

Geocoris lividipennis (p. 198).

To the locality given, add:—Mexico, Venta de Zopilote in Guerrero (*H. H. Smith*); Panama, Bugaba, Peña Blanca (*Champion*).

Geocoris punctipes (p. 198).

To the localities given, add:—Mexico, Teapa in Tabasco (*H. H. Smith*); Panama, Bugaba (*Champion*).

Geocoris borealis (p. 199).

To the localities given, add:—Guatemala, Quezaltenango 7500 feet (*Champion*).

PACHYGRONTHA (p. 200).

Pachygrontha œdancalodes (p. 200).

To the locality given, add:—MEXICO, Chilpancingo and Tepetlapa in Guerrero, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Chiacam and Panzos in Vera Paz (*Champion*).

2. **Pachygrontha bimaculata,** n. sp. (Tab. XXXIV. fig. 23.)

Allied to *P. œdancalodes*, but differing by the rather more elongate body, the antennæ concolorous, with the second joint a little shorter than the third; scutellum with the central levigate line usually dark castaneous; corium with a black spot on apical margin, but without one at apex.

Long. $5\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet, Tolé (*Champion*).

The smaller size, more elongate form, different colour and relative length of the joints of the antennæ, different markings of the corium, &c. seem to effectually separate these Panama specimens—of which we have received a fair series—from *P. œdancalodes*, which has a more northern habitat.

3. **Pachygrontha compacta,** n. sp.

Allied to *P. œdancalodes* in colour and markings, but differing by its smaller size and by the length of the pronotum being considerably more than half that of the corium, as in Stål's species; the third joint of the antennæ is unicolorous, the fourth fuscous.

Long. 5 millim.

Hab. GUATEMALA, Panzos and San Juan in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui 2500 feet (*Champion*).

Mr. Champion found three examples of this species.

4. **Pachygrontha longiceps.**

Pachygrontha longiceps, Stål, En. Hem. iv. p. 140. 2[1].

Hab. PANAMA, Bugaba, David (*Champion*).—COLOMBIA, Bogota[1].

Division **CLERADARIA.** (To precede the Division *Myodocharia* in the Subfam. *Myodochinæ*.)

Cleradaria, Stål, En. Hem. iv. p. 142 (1874).

In this Division the two basal joints of the rostrum scarcely exceed the length of the head. Of the few recorded genera, only one has hitherto been enumerated as partly belonging to the Neotropical fauna. I am now enabled to add a new genus.

CLERADA.

Clerada, Signoret, in Maillard's Notes sur l'île de la Réunion, Ins. p. 28; Stål, Hem. Afr. 2, pp. 152 et 155 (1865); En. Hem. iv. p. 143 (1874).

This genus is the only one in the small division 'Cleradaria' that has previously been recorded from the Neotropical region, and it contains but one species.

1. **Clerada apicornis.**

Clerada apicornis, Sign. in Maillard's Notes sur l'île de la Réunion, Ins. p. 28, t. 20. f. 8[1]; Stål, Hem. Afr. 2, p. 155. 1[2]; En. Hem. iv. p. 143[3].

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).—ANTILLES, Cuba[3]; VENEZUELA[3].—CONTINENTAL INDIA, Bengal[3]; REUNION[1 2].

Mr. Smith has sent two examples of this species, thus enabling us to further increase the record of its very wide distribution.

ACOLHUA, gen. nov. (To follow the genus *Clerada*.)

Head a little longer than broad, considerably exserted behind the eyes, which are also very strongly exserted. Antennæ setose, basal joint passing the apex of the head, second joint about equal to or very little longer than either the third or fourth joints, fourth joint incrassated. Pronotum with the base twice the width of the anterior margin, which has a distinct narrow collar, the anterior half obliquely depressed towards the head and containing two raised callosities, the posterior lobe somewhat gibbous. Scutellum a little longer than the claval suture. Clavus longitudinally punctate in three series. Corium concavely sinuate near base, and widened towards apex. Membrane passing the apex of the abdomen. Rostrum with the basal joint reaching the latitude of eyes, the second joint reaching or just passing the base of the head. Posterior tarsi with the basal joint a little longer than the apical joints together.

1. **Acolhua championi,** n. sp. (Tab. XXXIV. fig. 24.)

Brownish-ochraceous; head black; antennæ with the second and third joints pale ochraceous, the first and fourth joints and the base of the second dark castaneous. Claval suture stramineous. Body beneath castaneous, the sternum darkest; legs ochraceous. The head is transversely wrinkled; the pronotum and scutellum coarsely punctate; the corium is principally punctate near the margins, and in a curved series near apex.

Long. 3 millim.

Hab. GUATEMALA, Zapote (*Champion*).

A single example.

DAVILA, gen. nov. (To precede the genus *Ligyrocoris*, p. 201.)

Body elongate. Head with the anteocular portion longer than the postocular. Antennæ long; first joint a little longer than the head, and moderately incrassated, second and fourth joints about subequal in length. Thorax with a distinct collar at its anterior margin; pronotum with the anterior lobe much shorter than the posterior, much wider at base than at anterior margin, lateral angles subprominent, basal margin more or less concave. Corium with the lateral margins slightly concavely sinuate. Legs long, anterior femora armed beneath with a few long slender spines. Rostrum reaching the intermediate coxæ.

Davila has no particular affinity with any of the Central-American genera we have enumerated as belonging to the 'Myodocharia.' In general appearance it is somewhat allied to the Japanese genus *Prosomœus*, Scott.

1. **Davila concavus,** n. sp. (Tab. XXXV. fig. 1.)

Head blackish; antennæ ochraceous with the apex of the third joint blackish, fourth joint black with the basal half stramineous. Pronotum with the collar and posterior lobe brownish-ochraceous, the anterior lobe and five longitudinal fasciæ to posterior lobe—of which the outermost pair on each side are united, and

sometimes fused—blackish. Scutellum black, with two lateral fasciæ and the apex ochraceous. Clavus black, with its margins ochraceous. Corium blackish, with the lateral margins, veins, and discal spots ochraceous. Membrane blackish, with the veins ochraceous. Body beneath blackish, the legs ochraceous. The basal margin of the corium is somewhat strongly concave, and the lateral margins are distinctly concavely sinuate.

Long. 5–7 millim.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. G.*), Atoyac in Vera Cruz (*Schumann*), Teapa in Tabasco (*H. H. Smith*); GUATEMALA, El Tumbador, Cerro Zunil, Zapote, Teleman (*Champion*); PANAMA, Bugaba, Caldera, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

This species varies greatly in size and colour. In some specimens the blackish coloration is replaced by dark castaneous.

2. **Davila consanguineus,** n. sp. (Tab. XXXV. fig. 2.)

Allied to *D. concavus*, but larger and broader. Pronotum broader, a little less concave at base, and with the central dark fascia to the posterior lobe with a pale median line; the anterior lobe castaneous, not black. Scutellum with two central lateral spots and the apex ochraceous. Corium with the lateral margins nearly straight, or very obscurely concavely sinuate. Femora apically annulated with castaneous.

Long. 7 millim.

Hab. MEXICO, Atoyac in Vera Cruz (*Schumann*); GUATEMALA, San Juan in Vera Paz, El Tumbador, Cerro Zunil, Zapote, Capetillo (*Champion*).

This species appears fairly constant in character, both in size and coloration. We have been able to obtain about a dozen specimens.

3. **Davila pallescens,** n. sp. (Tab. XXXV. fig. 3.)

Very pale ochraceous. Head, anterior lobe of pronotum, and sternum blackish or dark castaneous; abdomen beneath castaneous. Posterior lobe of pronotum with six longitudinal brown fasciæ arranged in pairs. Scutellum brown, with two lateral ochraceous spots. Clavus brownish, with its margins ochraceous. Corium with a cellular brown space enclosing a pale spot near inner angle, a brown spot behind centre of lateral margin, and a similar spot at apex, in some specimens there is also a marginal spot near base. Membrane hyaline, shaded with pale fuscous. Legs ochraceous, posterior femora with an apical brown annulation; antennæ with the first, second, and third joints ochraceous, apex of third joint fuscous (fourth joint mutilated). The upper surface is coarsely punctate, the clavus most thickly, the corium most sparingly.

Long. 4 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 6000 feet, Caldera (*Champion*).

We have received a fair series of specimens, but mostly in poor condition, none having the antennæ perfect.

LIGYROCORIS (p. 201).

Ligyrocoris multispinus (p. 201).

To the localities given, add :—MEXICO, Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*),

Chilpancingo, Omilteme, and Xautipa, all in Guerrero (*H. H. Smith*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Ligyrocoris litigiosus (p. 201).

To the localities given, add:—MEXICO, Omilteme and Rincon in Guerrero (*H. H. Smith*); GUATEMALA, Chiacam, San Juan, and Tamahu, all in Vera Paz, Quiché Mts. (*Champion*).

Ligyrocoris abdominalis (p. 202).

To the localities given, add:—MEXICO, Ciudad in Durango (*Forrer*), Cuernavaca in Morelos, Fortin in Vera Cruz, Chilpancingo, Tepetlapa, and Xucumanatlan in Guerrero, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); PANAMA, Bugaba, Volcan de Chiriqui 2000 to 6000 feet (*Champion*).

PERIGENES, gen. nov. (To follow the genus *Ligyrocoris*, p. 203.)

Form and shape of *Ligyrocoris*, but without the lunate vittæ to the under surface of the abdomen; posterior legs shorter; antennæ shorter, the third joint with the apex distinctly incrassated.

1. **Perigenes dispositus,** n. sp. (Tab. XXXIV. fig. 25.)

Castaneous; head, anterior lobe of pronotum, scutellum, and membrane black; lateral margins of corium alternately ochraceous and black. Antennæ with the basal joint castaneous, the second ochraceous, the third black with the base ochraceous, fourth black with the basal third stramineous; second and fourth joints about subequal in length, and a little longer than the third. Head beneath and sternum black; abdomen beneath castaneous. Anterior legs more or less castaneous, intermediate and posterior legs ochraceous, with the apices of the femora, tibiæ, and tarsi castaneous. Inner margin and apical area of corium blackish, with two spots near the inner angle and the apex of the scutellum ochraceous. The body above is very finely setose; the anterior lobe of the pronotum is slightly longer than the posterior lobe.

Long. $6\frac{1}{2}$–7 millim.

Hab. GUATEMALA, San Gerónimo, Chiacam, Senahu, Cerro Zunil (*Champion*).

Seven examples.

MYODOCHA (p. 203).

Myodocha longicollis (p. 203).

To the localities given, add:—MEXICO, San Lorenzo near Cordova (*M. Trujillo*), Chilpancingo and Tepetlapa, both in Guerrero (*H. H. Smith*), Temax in North Yucatan (*Gaumer*).

Myodocha intermedia (p. 203).

To the localities given, add:—MEXICO, Jalapa (*F. D. G.*), Atoyac in Vera Cruz (*Schumann*), Chilpancingo in Guerrero (*H. H. Smith*); GUATEMALA, Las Mercedes (*Champion*).

Myodocha giraffa (p. 204).

To the locality given, add:—MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*).

A rare species; in all our large Mexican collections we have only found one specimen.

Myodocha unispinosa (p. 204).

To the localities given, add:—MEXICO, San Lorenzo near Cordova (*M. Trujillo*), Atoyac in Vera Cruz (*Schumann*), Teapa in Tabasco (*H. H. Smith*); NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba (*Champion*).

Myodocha inermibus (p. 204).

To the locality given, add:—PANAMA, Bugaba (*Champion*).

A second example of this species has now been received.

HERÆUS (p. 204).

Heræus illitus (p. 205).

To the localities given, add:—MEXICO, Amula in Guerrero, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Senahu, Cerro Zunil (*Champion*); PANAMA, Bugaba (*Champion*).

Some specimens measure 7 millim. in length.

CATENES, gen. nov. (To follow the genus *Heræus*, p. 205.)

Head very long, strongly exserted from behind the eyes, the anteocular portion triangularly pointed in front and longer than the postocular area; antennæ with the basal joint about reaching the apex of the head, second joint longest, third and fourth joints subequal in length. Pronotum long, twice as wide at base as at apex, constricted at centre, with the lobes about equal in length, the lateral margins sinuate. Scutellum about as broad at base as long. Clavus longitudinally punctate, its suture a little shorter than the scutellum. Rostrum slightly passing the posterior coxæ, with the basal joint shorter than the head (imperfectly seen owing to the specimens being carded). Anterior femora moderately incrassated, and robustly spined beneath on their apical halves.

The peculiar structure of the head will serve to identify this genus.

1. **Catenes porrectus,** n. sp. (Tab. XXXV. fig. 4.)

Pale castaneous; head, scutellum, and a central fascia, anterior lobe, and lateral angles of the pronotum dark castaneous; anterior collar to the pronotum, claval suture, and lateral margins of the corium ochraceous; membrane brownish, with the venation ochraceous. Head beneath and sternum black. Abdomen castaneous; legs ochraceous, femora punctured with black, intermediate and posterior femora obscurely biannulated with black near apices. Apices of the tibiæ black. Antennæ ochraceous, apex of the third and apical half of the fourth joints fuscous, basal half of the fourth joint stramineous. Posterior lobe of the pronotum and the corium coarsely brownly punctate.

Long. 8 millim.

Hab. GUATEMALA, Zapote (*Champion*); PANAMA, Volcan de Chiriqui 2500 feet (*Champion*).

Mr. Champion obtained a single specimen at each of the above localities.

PAMERA (p. 206).

Pamera longula (p. 206).

To the localities given, add:—MEXICO, Ciudad in Durango (*Forrer*), Cuernavaca in Morelos, Chilpancingo, Tierra Colorada, Venta de Zopilote and Xucumanatlan in Guerrero (*H. H. Smith*), Jalapa (*M. Trujillo*), Atoyac (*Schumann*); NICARAGUA, Chontales (*Janson*); PANAMA, Caldera (*Champion*).

Pamera parvula (p. 206).

To the localities given, add:—MEXICO, Frontera in Tabasco (*H. H. Smith*); GUATEMALA, San Isidro (*Champion*); HONDURAS, Ruatan I. (*Gaumer*).

2 (A). **Pamera serripes.**

Lygæus serripes, Fabr. Syst. Rhyn. p. 236. 168.
Plociomera serripes, Stål, Hem. Fabr. 1, p. 77. 1[1].
Pamera serripes, Stål, En. Hem. iv. p. 149. 14[2].

Hab. PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).—SOUTH AMERICA [1 2].

We have received a series of specimens agreeing well with Stål's description [1] of the Fabrician species. The length is given as $8\frac{1}{2}$ millim.; our examples range from 8–10 millim.

Var. *a.* Larger, and with the posterior lobe of the pronotum faintly showing the paler markings. Long. 8–10 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Pamera vicinalis (p. 207).

To the localities given, add:—MEXICO, Ciudad in Durango (*Forrer*), Teapa in Tabasco (*H. H. Smith*).

Pamera bilobata (p. 207).

Pamera dallasi, huj. op. p. 208.

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*), San Lorenzo near Cordova (*M. Trujillo*), Atoyac and Fortin in Vera Cruz, Chilpancingo and Tepetlapa in Guerrero, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan

(*Gaumer*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet, San Feliz (*Champion*).

After a careful examination of a very long series of specimens formerly separated under the above names, I am now forced to the conclusion that only one species exists. Different as are the typical examples of the two forms figured, and diverse as are the relative lengths of the pronotal lobes in those specimens, all divergencies fade or become assimilated when a large number of examples from different localities, as are now before me, can be compared with each other.

Pamera globiceps (p. 208).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*).

PSEUDOPAMERA (p. 209).

2. **Pseudopamera forreri,** n. sp. (Tab. XXXV. fig. 5.)

Pale ochraceous; eyes, scutellum (excluding basal disk and the apex), apical half of clavus, interior disk of corium, and two spots on its lateral margin (one near centre and the other at apex), dull castaneous. Abdomen beneath dark ochraceous. The head and anterior lobe of the pronotum are impunctate; the posterior pronotal lobe is very coarsely punctate; the scutellum has the castaneous portion very coarsely punctate, the corium (excepting lateral margins) finely punctate. The antennæ have the second joint very long, the first, third, and fourth joints subequal in length; the basal joint is strongly incrassated.

Long. 5 millim.

Hab. MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*).

Two examples only have been received. *P. forreri* is the second described species of the genus, and is quite diverse from the other representative, *P. aurivilliana*, Dist. The head is also less exserted than in the typical form of the genus.

PLOCIOMERA (p. 209).

Plociomera oblonga (p. 209).

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*), Tierra Colorada in Guerrero (*H. H. Smith*); GUATEMALA, Cerro Zunil (*Champion*); PANAMA, Bugaba (*Champion*).

Plociomera formosa (p. 210).

To the localities given, add:—MEXICO, Saltillo in Coahuila (*Dr. Palmer*), Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*), Cuernavaca in Morelos, Chilpancingo and Omilteme in Guerrero (*H. H. Smith*); GUATEMALA, Cerro Zunil, Capetillo, San Joaquin, Senahu (*Champion*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Plociomera cæca (p. 210).

To the localities given, add:—GUATEMALA, Quezaltenango 7500 feet (*Champion*).

4. Plociomera tumens.

Plociomera tumens, Stål, En. Hem. iv. p. 153. 7[1].

Hab. GUATEMALA, Lanquin, Chacoj, and San Juan in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).—COLOMBIA, Bogota[1] (*coll. Dist.*).

The specimens collected by Mr. Champion in Central America have the legs much darker than in typical examples from Bogota.

5. Plociomera albo-maculata, n. sp. (Tab. XXXV. fig. 6.)

Brownish-ochraceous; head, anterior lobe of pronotum, scutellum, and body beneath black; posterior lobe of pronotum with longitudinal blackish fasciæ; corium with the claval margins and venation paler ochraceous, basal half of lateral margins and some scattered spots on disk and near apex greyish; apex of scutellum stramineous; membrane greyish hyaline. Antennæ fuscous, second joint paler and longest; legs ochraceous, the femora castaneous. Body above coarsely punctate.

Long. 4 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

A single example only, which appears to be most closely allied to the Texan *P. fuscicornis*, Stål.

CHOLULA (p. 210).

Cholula variegata (p. 211).

To the locality given, add:—GUATEMALA, San Gerónimo (*Champion*).

A second example of this species is now recorded.

1 (A). Cholula discoloria, n. sp. (Tab. XXXV. fig. 7.)

Ochraceous; anterior half of head, anterior lobe of pronotum, scutellum, and the membrane dark castaneous or blackish; posterior margins of pronotum at the lateral angles stramineous. Clavus with a black spot on each side near apex of scutellum. Corium with a black spot on each side of claval apex, a small castaneous spot near base, and a central castaneous fascia containing two median ochraceous spots, the apical angle black. Membrane pale at base and apex. Head and sternum beneath black; posterior margins of pro-, meso-, and metasternum ochraceous; abdomen beneath castaneous (carded specimen); femora castaneous; tibiæ and tarsi ochraceous. Antennæ with the first and second joints ochraceous (remainder mutilated). The body above is coarsely punctate.

Long. 4 millim.

Hab. PANAMA, Caldera (*Champion*).

A single example.

ERLACDA. (To follow the genus *Cholula*, p. 211.)

Erlacda, Signoret, Ann. Soc. Ent. Fr. (4), iii. p. 567 (1864); Stål, En. Hem. iv. p. 144 (1874).

This genus was founded for the reception of a single Chilian species, and the Mexican one I here described agrees in all respects with the generic diagnosis, and also in general form and appearance with the Chilian type, save by the length of the first joint of the antennæ, which in that species scarcely reaches the apex of the head, but which in the species I now describe passes the apex by quite two-thirds its length. Although the length of the first joint of the antennæ is doubtless a good generic character in differentiating this difficult group, I have refrained from adding another genus to those I have already been compelled to propose.

1. **Erlacda (?) insititia,** n. sp. (Tab. XXXV. fig. 8.)

Black; apical joint of antennæ (excluding base and apex), intermediate and posterior legs (excluding apices of femora, bases and apices of tibiæ, and the apices of the tarsi), basal half of lateral margin of corium and a spot near apex of same, and a spot at base of lateral margin of membrane pale ochraceous; anterior tibiæ pale brownish. Membrane black, not reaching the apex of the abdomen. Posterior lobe of the pronotum and the corium coarsely punctate. Antennæ with the second joint slightly longer than the third, first and fourth joints subequal in length. The head, lateral areas of the pronotum, and anterior femora are prominently setose; the anterior femora are longitudinally and robustly spined beneath.

Long. 8 millim.

Hab. Mexico, Amula in Guerrero 4600 feet (*H. H. Smith*).

We have received a single example of this well-marked species.

PEPHYSENA (p. 211).

Pephysena levis (p. 211).

To the localities given, add:—Mexico, Teapa in Tabasco (*H. H. Smith*).

PRYTANES, gen. nov. (To follow the genus *Pephysena*, p. 212.)

Pronotum with the anterior lobe globose and rather more than twice the length of the posterior lobe, which has its posterior margin concavely sinuate. Head inserted to the eyes; antennæ slender, apical joint incrassated, basal joint passing apex of head and shorter than the second joint; scutellum with a central carination; corium very coarsely punctate, the lateral margins convex, apices rounded and not quite reaching apex of abdomen. Membrane absent or very rudimentary. Anterior femora strongly incrassated and spined beneath.

This genus is allied to *Carpilis*, Stål.

1. **Prytanes globosus,** n. sp. (Tab. XXXV. fig. 9.)

Head black; antennæ ochraceous, the apical joint fuscous; pronotum with the anterior lobe castaneous, the posterior lobe ochraceous, with three black fasciæ, and its lateral margins levigate and ochraceous; scutellum black, with the apex ochraceous; corium ochraceous, with dark punctures spotted with black on apical half; upper surface of abdomen as seen beyond corium reddish-ochraceous. Body beneath

blackish; legs ochraceous; femora (excluding apices and bases of tibiæ) castaneous. The anterior lobe of the pronotum is very globose, slightly pilose and finely punctate; the posterior lobe is coarsely punctate. The scutellum and corium are very coarsely punctate, the last with its lateral margin narrowly pale levigate.

Long. 3 millim.

Hab. BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*).

Three examples.

2. **Prytanes ater,** n. sp. (Tab. XXXV. fig. 10.)

Black and somewhat prominently pilose; legs castaneous, apices of the femora and the intermediate and posterior tibiæ and tarsi ochraceous; antennæ ochraceous, the apical joint somewhat infuscated; second joint longest, third shorter than fourth. The posterior lobe of the pronotum is very obscurely punctate; the scutellum and corium very coarsely punctate, the last with its lateral margins very narrowly and obscurely castaneous.

Long. 5 millim.

Hab. MEXICO, Amula in Guerrero (*H. H. Smith*).

This species, of which we have only received a single example, has the anterior lobe of the pronotum considerably less globose than in *P. globosus*.

SISAMNES, gen. nov. (To follow the genus *Prytanes*.)

Antennæ with the joints moderately short and incrassated, second joint slightly longest, and third slightly shortest. Head about as broad as long, inserted to the eyes. Pronotum with the anterior collar distinct, the constriction near base, the anterior lobe being thus more than twice the length of the posterior lobe and moderately tumid, with its lateral angles slightly convex; base of posterior lobe concave, the lateral angles rounded. Scutellum centrally carinate; corium coarsely punctate, its lateral margins moderately convex, extending to about two-thirds the length of abdomen; membrane absent. Anterior femora incrassated, spined beneath.

This genus, like *Prytanes*, is allied to *Carpilis*, Stål, the short description of which agrees with neither of them.

1. **Sisamnes contractus,** n. sp. (Tab. XXXV. fig. 11.)

Pale brownish-ochraceous; antennæ, head, and anterior lobe of pronotum castaneous; exposed apical third of abdomen piceous. Body beneath castaneous; legs ochraceous, the femora (excluding apices) castaneous. The posterior lobe of the pronotum is somewhat coarsely punctate; the scutellum punctate, and with a central carination which is bifurcate anteriorly; the corium and clavus are very coarsely punctate, the first with its lateral margins very narrowly ochraceous.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Dueñas (*Champion*).

Two examples.

BATHYCLES, gen. nov. (To precede the genus *Neocattarus*, p. 213.)

Head moderately exserted behind the eyes, about as long as greatest breadth at eyes; ocelli situate close to eyes at base. Antennæ with the first joint distinctly but narrowly setiform at base and considerably passing the apex of the head, second joint longest. Pronotum with the anterior margin narrower than the

outer margins of eyes and scarcely half the width of base, the lateral margins narrowly laminate and strongly sinuate; transversely constricted about centre, the anterior lobe being moderately globose. Scutellum longer than the claval suture. Corium a little narrower than the abdomen, the margins of which are exposed and moderately prominent. Rostrum with the basal joint a little shorter than the head, second about equal in length to the first, third as long as second and first together, fourth very small.

The more or less exposed abdominal margin is a salient feature of this genus.

1. **Bathycles maculatus,** n. sp. (Tab. XXXV. fig. 12.)

Pitchy-black; two small spots near claval suture, the base and a large spot near apex of corium ochraceous; membrane fuscous; apical joint of the antennæ brownish; bases of the femora apparently narrowly ochraceous (carded specimens). Antennæ with the second joint longest, the third a little shorter than the fourth. The body above is obscurely and finely punctate. The head, anterior lobe of pronotum, and the scutellum are rather darker in hue.

Long. 6 millim.

Hab. GUATEMALA, El Tumbador, Pantaleon, Mirandilla (*Champion*).

Four examples were obtained from the above localities.

NEOCATTARUS (p. 213).

2 (A). **Neocattarus thoracicus,** n. sp. (Tab. XXXV. fig. 13.)

Closely allied in size and general markings to *N. vegetus*, Dist., but differing structurally by the form of the base of the posterior lobe to the pronotum, which is distinctly, broadly, transversely excavated between the lateral angles, and is there sometimes castaneous in hue. Antennæ ochraceous, with the apical joint darker; second and fourth joints subequal in length.

Long. $3\frac{1}{2}$–4 millim.

Hab. GUATEMALA, Chacoj in Vera Paz (*Champion*); PANAMA, Bugaba (*Champion*).

One specimen from each of the above localities.

Neocattarus vigens (p. 214).

To the localities given, add:—PANAMA, Caldera (*Champion*).

Neocattarus parvus (p. 215).

To the locality given, add:—GUATEMALA, Pantaleon (*Champion*).

Neocattarus gracilis (p. 215).

To the locality given, add:—PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

6. **Neocattarus maculatus,** n. sp. (Tab. XXXV. fig. 14.)

Head and pronotum black; posterior lobe of pronotum with eight small ochraceous spots, situate two on each sublateral area and two on the lateral margins. Scutellum black. Corium stramineous; claval suture and a spot on each side of it, two small contiguous spots near base of corium, and apical half of

same black, the last containing an ochraceous spot on the lateral margin. Membrane fuscous. Body beneath black; lateral and posterior margins of metasternum stramineous. Legs stramineous; anterior femora, apices of intermediate and posterior femora, and the tibiæ castaneous. Antennæ with the first and second joints castaneous, base of the second stramineous (remainder mutilated).

Long. 4 millim.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

We have only received one example of this well-marked species; the lateral margins of the anterior lobe of the pronotum are somewhat distinctly concave.

7. **Neocattarus (?) irrorandus,** n. sp. (Tab. XXXV. fig. 15.)

Head and pronotum black; posterior lobe of pronotum with two ochraceous fasciæ. Scutellum black. Corium stramineous; clavus, claval margin, a spot near base, and the apical half black, the last containing a transverse elongate ochraceous spot; membrane fuscous, its base pale ochraceous. Body beneath and legs black; apices of femora narrowly obscure ochraceous. Antennæ ochraceous, the fourth joint and the apex of the third black.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Cubilguitz in Vera Paz (*Champion*).

We possess a single example of this species, which is structurally somewhat divergent from the other species described. The head, including the outer margins of the eyes, is very slightly broader than the anterior margin of the pronotum, and the anterior lobe of the pronotum is considerably broader than the posterior lobe; the lateral margins of the anterior lobe are also distinctly convex.

CÆNEUS, gen. nov. (To follow the genus *Neocattarus*, p. 215.)

Body somewhat elongate, tapering towards the apex of the abdomen. Head inserted to the margins of the eyes, about as long as broad; including margins of eyes about equal in width to the anterior margin of the pronotum. Antennæ with the basal joint short and not passing the apex of the head; apical joint longest. Pronotum with the base broader than, but not twice as wide as, the anterior margin, which is broadly and coarsely punctate, the lobes bicolorous, the transverse constriction obscure; basal margin truncate. Scutellum coarsely punctate, with a faint central carination. Clavus and corium lineately punctate. Anterior femora spined beneath. Rostrum reaching or slightly passing the intermediate coxæ; the basal joint a little longer than the head.

1. **Cæneus novitius,** n. sp. (Tab. XXXV. fig. 16.)

Ochraceous; head, basal and apical joints of antennæ (excluding base of last one), anterior lobe of pronotum, scutellum, and body beneath black; posterior lobe of pronotum more or less shaded with castaneous. Corium with a spot at lateral margin, some central tessellate markings, and the apex castaneous. Membrane fuscous. Femora castaneous; tibiæ and tarsi ochraceous, the bases of the tibiæ castaneous. The antennæ have the second and third joints subequal in length or the second a little longer than the third; fourth much the longest and moderately incrassated. The head and anterior lobe of the pronotum are greyishly pilose; the posterior pronotal lobe is sparingly but coarsely punctate.

Long. 3 millim.

Hab. NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba (*Champion*).

We have received a single example from each of the above localities. That from the State of Panama is figured; the Nicaraguan specimen is rather darker in hue.

SCYTHINUS, gen. nov. (To follow the genus *Cœneus*.)

Body somewhat elongate, but moderately broad. Antennæ with the basal joint very long, considerably passing the apex of the head; second joint almost as long as the first, a little longer than the third; second and third joints obscurely hirsute. Head a little longer than broad, distinctly exserted behind eyes, and with a small rounded protuberance on each side of inner margins of eyes. Pronotum with the base rather more than twice as broad as the anterior margin, constricted at middle, the posterior lobe punctate, the anterior margin coarsely punctate. Scutellum without a central carination; clavus and corium coarsely punctate. Anterior femora unarmed. Rostrum reaching the intermediate coxæ, with the basal joint about as long as the head; second joint about as long as the first (imperfectly seen; carded specimen).

It is somewhat difficult to define the exact position in the Neotropical 'Rhyparochromaria' that this genus should occupy. By the exserted head it would seem to approach the *Ozophora* of Uhler, but differs from that genus by the unarmed anterior femora.

1. **Scythinus splendens**, n. sp. (Tab. XXXV. fig. 17.)

Head, pronotum, and scutellum reddish-ochraceous. Corium ochraceous, with the apex and a spot near centre of lateral margin purplish-black. Membrane ochraceous. Antennæ with the basal joint reddish-ochraceous; the second and third joints fuscous; the apical joint stramineous, with its base and apex very narrowly fuscous. Body beneath reddish-ochraceous; rostrum and legs ochraceous.

Long. 3 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 feet (*Champion*).

A single example.

CLIGENES, gen. nov. (To follow the genus *Scythinus*.)

Head inserted to the posterior margin of the eyes; antennæ with all the joints moderately incrassated, first joint just passing the apex of the head; pronotum strongly constricted in the middle, the anterior lobe broader than the posterior lobe, the basal margin distinctly concave; scutellum moderately large and without a central carination; clavus longitudinally punctate; corium coarsely punctate, broadly truncate at its inner angles, and from thence somewhat convexly rounded to apices.

The peculiar structure of the corium will serve to distinguish this genus, of which I am unable to describe the rostrum and under surface, owing to the typical specimen being carded.

1. **Cligenes distinctus**, n. sp. (Tab. XXXV. fig. 18.)

Ochraceous; antennæ, anterior lobe of pronotum, and scutellum castaneous; head, lateral angles of pronotum, a spot near centre of lateral margins of corium, apex of corium, and membrane blackish; apex of scutellum ochraceous, preceded by a blackish spot; body beneath blackish or dark castaneous; the legs ochraceous. The posterior lobe of the pronotum is coarsely punctate, the lateral margins of the corium are impunctate; the antennæ have the first and third and the second and fourth joints subequal in length.

Long. $2\frac{1}{2}$ millim.

Hab. PANAMA, Caldera (*Champion*).

A single example.

SALACIA. (To follow the genus *Cligenes*.)

Salacia, Stål, En. Hem. iv. p. 156 (1874).

The following species appear to belong to this genus, of which four species have been previously described, one from Texas, another from Guadeloupe, and two from Rio Janeiro.

Pronotum with the transverse constriction nearer to the anterior than to the posterior margin.

1. **Salacia (?) picturata,** n. sp. (Tab. XXXV. fig. 19.)

Head, pronotum, and scutellum castaneous, apex of scutellum and the corium ochraceous, the last with a small spot near centre of lateral margin and the apex dark castaneous; membrane dull greyish; antennæ variable in hue, the first and fourth joints usually ochraceous. Body beneath castaneous, legs ochraceous. The antennæ have the second joint slightly longest, the third and fourth subequal in length; the clavus is longitudinally punctate, the punctures on the corium are principally submarginal and subclaval; the pronotum and scutellum are coarsely punctate.

Var. *a*. Head, pronotum, and scutellum black.

Long. 3 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet, Bugaba (*Champion*).

We have received eight (carded) specimens of this species.

Pronotum with a median constriction.

2. **Salacia (?) delineata,** n. sp. (Tab. XXXV. fig. 20.)

Head, pronotum, scutellum, and membrane black; corium and margins of membrane ochraceous, the corium with apex and two contiguous spots extending from inner angle to lateral margin, black. Body beneath and legs black, apices of femora and the tibiæ and tarsi ochraceous. Antennæ fuscous, the basal and apical joints ochraceous; second and third joints subequal in length and moderately incrassated. The pronotum and scutellum are almost impunctate.

Long. 2 millim.

Hab. PANAMA, Peña Blanca (*Champion*).

A single example.

3. **Salacia (?) punctata,** n. sp. (Tab. XXXV. fig. 23.)

Dark castaneous; antennæ, legs, basal margin of corium, and apex of clavus ochraceous. Membrane and body beneath black. Antennæ with the second joint a little longer than the third (fourth joint mutilated). Body above obscurely hirsute and somewhat coarsely punctate.

Long. 2 millim.

Hab. PANAMA, Peña Blanca (*Champion*).

We possess a single example only of this species, which I place provisionally in the genus, though the coarsely punctate corium is a strong divergent character.

RHYPAROCHROMUS (p. 215).

Rhyparochromus plenus (p. 216).

To the locality given, add :—GUATEMALA, Quiché Mts. 8000 feet (*Champion*).

PETISSIUS, gen. nov. (To follow the genus *Trapezus*, p. 217.)

Allied to *Trapezonotus* and *Trapezus*; from the first it differs by having the pronotum much broader than long and the head longer than broad, and from *Trapezus* by having the head, including the outer margins of eyes, about equal in width to the anterior margin of the pronotum. From both and from all the allied genera it is distinguished by the shape of the pronotum, which is much narrower at apex than at base, with the lateral margins non-ampliated. The first and second joints of the antennæ are sparingly hirsute; the anterior femora are spinous beneath at apex, and the intermediate and posterior tibiæ are longly setose.

1. **Petissius assimilandus,** n. sp. (Tab. XXXV. fig. 21.)

Head black; antennæ ochraceous, with the apical joint infuscated, second joint slightly longer than the third, which is longer than the fourth. Pronotum ochraceous, with the anterior lobe mostly black and impunctate, the disk coarsely and darkly punctate, the punctures forming some longitudinal fasciæ on the posterior lobe, and being particularly thick on the sublateral and subanterior margins. Scutellum brownish, thickly covered with coarse black punctures, and with a central levigate and two lateral ochraceous fasciæ. Corium brownish, thickly covered with coarse black punctures, margins of clavus, margins of corium, and the veins ochraceous, and with a few small discal ochraceous spots. Membrane dark fuscous. Body beneath blackish; legs and rostrum ochraceous.

Long. 7 millim.

Hab. GUATEMALA, Mirandilla (*Champion*); PANAMA, Bugaba (*Champion*).

We have received four examples of this species.

2. **Petissius (?) diversus,** n. sp. (Tab. XXXV. fig. 22.)

Body above reddish-ochraceous and pilose; eyes black; scutellum and apical areas of the corium castaneous; antennæ with the basal joint reddish-ochraceous, the remaining joints dull brownish; second joint a little longer than the third, third and fourth joints subequal in length; membrane pale ochraceous; body beneath reddish-ochraceous, legs pale ochraceous. The lateral margins of the pronotum and corium are very narrowly pale ochraceous; the pronotum has a transverse impression; the corium is strongly pilose.

Long. 3 millim.

Hab. GUATEMALA, Paraiso, El Reposo (*Champion*); PANAMA, David (*Champion*).

We have received three (carded) specimens of this species, for which I hesitate to propose a new genus. It differs from the type of *Petissius* by having the head including the eyes a little narrower than the anterior margin of the pronotum; the other characters are, however, generally the same.

EREMOCORIS (p. 218).

2. **Eremocoris germanus,** n. sp. (Tab. XXXV. fig. 24.)

Head black; pronotum with the anterior lobe castaneous, with its lateral margins ochraceous, the posterior lobe black, with an ochraceous spot near the lateral angles. Scutellum pale castaneous, with the lateral

margins, apex, and basal spot black. Corium ochraceous, punctured with brown, the lateral margins impunctate, with an elongate spot near centre and at apex dark castaneous. Membrane fuscous, the veins at base ochraceous. Body beneath dark castaneous; the legs ochraceous, femora and tarsi more or less castaneous; antennæ ochraceous, the fourth and apical half of the third joint blackish. Antennæ with the second and third joints subequal in length.

Long. 4 millim.

Hab. GUATEMALA, Totonicapam (*Champion*); PANAMA, Volcan de Chiriqui 4000 feet (*Champion*).

Allied to *E. tropicus*, Dist., but differing by the larger size, less globose anterior lobe of the pronotum, different colour of the antennæ, &c.

Two examples.

BALBOA, gen. nov. (To follow the genus *Eremocoris*, p. 219.)

General characters of *Lethæus*, Dall., but differing from that genus by having the second joint of the antennæ not longest, but only subequal in length to the fourth; the rostrum has the basal joint as long as the head and not shorter than the second and third joints. Anterior femora spined beneath. Membrane with the second, third, and fourth nervures neither united nor forming basal cells. By the last character *Balboa* is allied to *Cistalia*, Stål, but differs by having the basal joint of the antennæ somewhat thickened as in *Lethæus*, as well as by the other characters enumerated above.

1. **Balboa variabilis**, n. sp. (Tab. XXXV. fig. 25.)

Ochraceous, somewhat thickly and coarsely punctured with brown; apex of third and apical half of fourth joint of antennæ, head, anterior lobe of pronotum, a spot on each side of the clavus near apex, two spots on inner margin of corium, and two spots on its lateral margin—one near centre and the other at apex,—head beneath, and sternum black. The lateral margins of the corium are impunctate, the membrane much clouded with fuscous; the legs are ochraceous, with the apices of the femora more or less annulated with castaneous.

Var. *a*. Darker in hue and the posterior lobe of the pronotum with three longitudinal black fasciæ.

Long. $5\frac{1}{2}$–$7\frac{1}{2}$ millim.

Hab. MEXICO, Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*), Omilteme in Guerrero (*H. H. Smith*); GUATEMALA, Quezaltenango, Quiché Mts., Cerro Zunil, Volcan de Atitlan, Chiacam, San Gerónimo, Coban (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 6000 feet (*Champion*).

Of this very variable species, both in size and colour, we have received a long series; it appears to be scarce in Mexico and very plentiful in Guatemala. In some of the typical forms the anterior lobe of the pronotum is castaneous rather than black.

GONATAS (p. 219).

Gonatas typicus (p. 219).

To the localities given, add:—MEXICO, Omilteme in Guerrero (*H. H. Smith*); GUATEMALA, Paraiso (*Champion*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet, Tolé (*Champion*).

Gonatas divergens (p. 219).

To the localities given, add:—MEXICO, Tierra Colorada in Guerrero, Teapa in Tabasco (*H. H. Smith*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet, San Feliz, Tolé (*Champion*).

DORACHOSA, gen. nov. (To follow the genus *Gonatas*, p. 220.)

Allied to *Gonatas*, Dist., but differing by the much more concave basal margin to the pronotum; the very much longer scutellum; the head, including eyes, not narrower than the anterior margin of pronotum; the body more elongate and attenuated posteriorly.

1. **Dorachosa illuminatus,** n. sp. (Tab. XXXVI. fig. 1.)

Black; basal joint of antennæ (excluding apex) and the legs ochraceous; apices of the femora and the tibiæ and the tarsi more or less infuscated. Antennæ with the second joint considerably longer than the third, which is almost the length of the fourth; margins of the anterior lobe and the whole basal lobe of the pronotum and the scutellum thickly and finely punctate; corium sparingly but coarsely punctate; membrane pale fuscous.

Long. $5\frac{1}{2}$ millim.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*); GUATEMALA, Quiché Mts. 8000 feet (*Champion*).

We have received one example from Mexico and three from Guatemala.

Var. *umbrosus* (n. sp.?).

Body including legs and antennæ wholly black.

Long. $5\frac{1}{2}$ millim.

Hab. NORTH AMERICA, Texas (*coll. Dist.*).—MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*); GUATEMALA, Ostuncalco, Quiché Mts. (*Champion*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Beyond the colour, I can find no sufficient structural character to warrant this form being described as a distinct species. We have received it much more plentifully than the typical form here described.

BUBACES, gen. nov. (To follow the genus *Dorachosa*.)

Head longer than broad, inserted almost to the posterior margin of the eyes. Antennæ with the first joint very long, and passing the apex of the head for half its length. Pronotum as long as broad, nearly twice as broad at base as at apex, constricted near centre, the lateral angles subprominent. Scutellum scarcely longer than the claval suture. Clavus thickly longitudinally punctate. Corium widened towards apex. Membrane complete. Rostrum with the first joint reaching basal margin of the head, the fourth joint considerably passing the posterior coxæ.

1. **Bubaces castaneus,** n. sp. (Tab. XXXVI. fig. 2.)

Castaneous; eyes black, lateral angles of the pronotum and lateral margins of the corium pale ochraceous; antennæ with the first and second joints ochraceous, the third pale fuscous (remainder mutilated); body beneath very dark castaneous; membrane with the lateral margins pale hyaline. Antennæ with the

first joint a little longer than the third, both shorter than the second; posterior lobe of the pronotum coarsely punctate; scutellum and corium somewhat sparingly but coarsely punctate.
Long. 5 millim.

Hab. MEXICO, Temax in North Yucatan (*Gaumer*).

A single (carded) specimen.

RHAPTUS. (To follow the genus *Bubaces*.)

Rhaptus, Stål, En. Hem. iv. p. 163 (1874).

This genus, allied to the European *Lamprodema*, was founded by Stål for the reception of a Chilian species. We have received a series of specimens from Guatemala which apparently belong to *Rhaptus*, and which I have included in it. As in all the examples of *Lamprodema brevicollis* in my collection the membrane is rudimentary, a character not mentioned by Stål in his generic diagnosis, but the anterior femora are finely spined beneath, a character which separates it from the European genus.

1. **Rhaptus collina**, n. sp. (Tab. XXXVI. fig. 3.)

Head and pronotum shining black, the lateral angles of the pronotum ochraceous; scutellum and corium black, very coarsely punctate, lateral margins of the corium ochraceous; membrane rudimentary; apex of abdomen as seen above castaneous. Body beneath blackish; legs ochraceous, femora (excluding apices) castaneous. Antennæ with the first and second joints ochraceous, the third and fourth piceous, the apex of the fourth ochraceous; first and second joints longest, second a little longer than first, third and fourth subequal in length.
Long. 3½ millim.

Hab. GUATEMALA, Quiché Mts. (*Champion*).

Seven examples.

ESURIS. (To follow the genus *Rhaptus*.)

Esuris, Stål, En. Hem. iv. p. 164 (1874).

I place another species in this genus by the characters of the rudimentary membrane, the setose condition of the body, the obscurely spined anterior incrassated femora, &c.

One species has previously been described, from Rio Janeiro.

1. **Esuris purpurata**, n. sp. (Tab. XXXVI. fig. 4.)

Purplish-brown, thickly and greyishly hirsute; lateral and posterior margins of the pronotum, apical margin of the corium, body beneath, and legs ochraceous. Antennæ with the first and second joints ochraceous, the third and fourth fuscous; second, third, and fourth joints almost subequal in length.
Long. 2 millim.

Hab. GUATEMALA, Paso Antonio (*Champion*).

A single example.

Subfam. *HETEROGASTRINÆ.* (To precede the Fam. *Pyrrhocoridæ*, p. 220.)

Heterogastrina, Stål, Öfv. Vet.-Ak. Förh. 1872, p. 40.

This subfamily contains two Palæarctic genera, one of which has been recorded from North America by Prof. Uhler, one purely Nearctic genus, apparently found in our fauna, and a genus founded to contain some species from the Philippine Islands. Doubtless more remain to be discovered in many quarters.

PELIOPELTA.

Peliopelta, Uhler, Check-List Hemipt.-Heteropt. North America, p. 15 (1886).
Helonotus, Uhler, Bull. U.S. Geol. & Geog. Surv. ii. p. 312 (1875) (nomen præocc.).

This genus was founded for the reception of a somewhat widely distributed North-American species. We have received an insect from Mexico and Guatemala which agrees in all essential respects with the generic diagnosis, and which is therefore now described as a *Peliopelta*.

1. **Peliopelta tropicalis**, n. sp. (Tab. XXXVI. fig. 5.)

Brownish-ochraceous; eyes, margins of the longitudinal carina to scutellum, two spots on apical margin of corium, and a series of spots to connexivum black. Base of anterior lobe to pronotum, and five narrow longitudinal fasciæ to posterior lobe, and the lateral angles of same, castaneous. Membrane pale greyish hyaline. Antennæ with the two basal joints ochraceous, their apices and the whole of the third and fourth joints castaneous. Body beneath ochraceous and thickly greyishly pilose; legs ochraceous, the femora (excluding apices) castaneous, the tibiæ annulated with black near base and apex. The head, pronotum, and scutellum are somewhat thickly and coarsely punctate, the corium more finely and sparingly punctate.

Long. 5 millim.

Hab. Mexico, Amula in Guerrero (*H. H. Smith*); Guatemala, Quiché Mts. (*Champion*).

A single example was sent us by Mr. Champion and two by Mr. Smith, which are very distinct from the description given by Prof. Uhler of his *P. abbreviatus*, though allied by the markings of the tibiæ. The specimens being carded, I am unable to describe the under surface.

LARGUS (p. 220).

Largus subligatus (p. 221).

To the localities given, add:—Mexico, Tepic in Jalisco (*Schumann*), Acapulco in Guerrero (*H. H. Smith*).

Largus convivus (p. 222).

To the localities given, add:—Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*), Omilteme and Xucumanatlan in Guerrero (*H. H. Smith*).

Largus cinctus (p. 223).

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa, and Ventanas in Durango (*Forrer*), Morelia (*F. D. G.*), Cuernavaca in Morelos (*H. H. Smith*), Atoyac (*Schumann*), Orizaba (*H. H. Smith & F. D. G.*), Amula, Chilpancingo, La Venta, Omilteme and Xucumanatlan, all in Guerrero (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*); GUATEMALA, Chacoj, Senahu, and Teleman in Vera Paz, Paraiso (*Champion*).

I have previously expressed my reasons for considering the *L. varians*, Stål, as representing simply a variety of *L. cinctus*, H.-S. I have now a still larger series of Mexican specimens before me, which causes a strong doubt whether even the *L. longulus*, Stål (p. 223), can be considered a distinct species. To separate these named forms is simply an operation of sorting specimens, and even this breaks down when a long series is examined. Had that most careful worker and systematist Stål possessed the material that we have amassed, he would doubtless have pursued a more synthetic course. The species varies greatly in size, from 9 to 16 millim., the breadth of the body is also a most variable character.

FIBRENUS (p. 224).

Fibrenus globicollis (p. 224).

To the localities given, add:—PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Fibrenus gibbicollis (p. 224).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

THERANEIS (p. 225).

Theraneis pulchra (p. 225).

To the localities given, add:—PANAMA, Tolé, San Feliz (*Champion*).

In some examples of this species the corium is ochraceous.

STENOMACRA (p. 226).

Stenomacra marginella (p. 226).

To the localities given, add:—MEXICO, Parras and Saltillo in Coahuila (*Dr. Palmer*), Sierra Madre de Tepic in Jalisco (*Richardson*), Cuernavaca in Morelos, Orizaba in Vera Cruz, Amula, Chilpancingo, and Xucumanatlan in Guerrero (*H. H. Smith*).

Stenomacra cliens (p. 226).

Stenomacra sallei, Fallou, Rev. d'Entomol. x. p. 8.

M. Fallou has kindly forwarded me a Mexican specimen which he had described as a new species under the name of *S. sallei*; but this proves to be identical with *S. cliens*, Stål, as also recently observed by Dr. Bergroth (Rev. d'Entomol. xi. p. 262).

PHÆAX, gen. nov. (To precede the genus *Arhaphe*, p. 226.)

Head very broad, immersed to the posterior margins of the eyes, obscurely angulated anteriorly. Antennæ inserted at nearer apex of head than eyes; basal joint incrassated, about or scarcely reaching apex of head, second joint longest, its apex slightly incrassated, third joint more or less distinctly incrassated at apex, and shorter than the fourth, which is thickened. Pronotum long, very strongly constricted at about centre, the anterior lobe moderately globose, the posterior lobe angularly depressed from its disk to the median constriction: anterior lobe sublevigate, excepting near anterior margin, posterior lobe thickly and coarsely punctate. Scutellum somewhat centrally gibbous. Abdomen and corium very strongly concavely sinuate to a little beyond centre, where they are widened, and the abdomen is convexly rounded to apex; the membrane does not cover the lateral abdominal margins. The anterior femora are very strongly incrassated, and have one or two long spines beneath near apex; the posterior legs are long. Rostrum with the basal joint not quite reaching the latitude of the eyes, second joint slightly passing the base of the head, apical joint reaching or slightly passing the anterior coxæ, second and fourth joints about subequal in length, and a little longer than the third joint. Ocelli absent.

I place this remarkable genus near *Arhaphe*, with which, however, it has little in common.

1. **Phæax formicarius**, n. sp. (Tab. XXXVI. fig. 6.)

Black; corium with a greyish-white spot at about centre of lateral margin and another at the apex, these spots being margined with intense black, a pale spot on connexivum near apex of corium. Antennæ with the apex of the first joint and the base of the second pale ochraceous; intermediate and posterior femora annulated with greyish-white near base; tarsi ochraceous.

Long. $5\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 6000 feet (*Champion*).

Four examples.

2. **Phæax balteatus**, n. sp. (Tab. XXXVI. fig. 7.)

Allied to the preceding species, *P. formicarius*, but smaller, and with the first and second joints of the antennæ (excluding apex of second) ochraceous; anterior femora and tibiæ brownish-ochraceous, basal annulation to intermediate and posterior femora small, obscure, and ochraceous, pale spots to corium smaller and more obscure, and with a transverse greyish-white fascia across the base of the membrane. The anterior lobe of the pronotum is also less punctate at its anterior margin.

Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

Two examples.

ARHAPHE (p. 226).

Arhaphe carolina (p. 227).

To the localities given, add:—MEXICO, San Blas in Jalisco (*Richardson*), Pinos Altos in Chihuahua (*Buchan-Hepburn*), Colima city (*Höge*).

PYRRHOCORIS (p. 228).

Pyrrhocoris apterus (p. 228).

This species was included in our fauna on the authority of several specimens labelled "Costa Rica—Van Patten." We have, however, received no further confirmation of its presence in Central America from any other of the collections subsequently received.

DYSDERCUS (p. 229).

Dysdercus mimus (p. 229).

To the localities given, add:—MEXICO, Ciudad and Milpas in Durango (*Forrer*), Sierra Madre de Tepic in Jalisco (*Richardson*), San Lorenzo near Cordova (*M. Trujillo*), Atoyac (*Schumann*), Orizaba (*H. H. Smith & F. D. G.*), Chilpancingo, Tepetlapa, and Tierra Colorada in Guerrero, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); GUATEMALA, Purula (*Champion*); PANAMA, Bugaba (*Champion*).

In examining a very long series of this species, I have found some dark specimens which can only be separated from *D. flavo-limbatus*, Stål (p. 230), by their much smaller size. It is probable that they all really belong to one species, and possible that *D. albidiventris*, Stål (p. 229), is still another varietal form of it. Had the wealth of material now before me been available when I wrote in 1883, I should have greatly hesitated in following Stål in this matter, and recording three distinct species.

Dysdercus albidiventris (p. 229).

To the localities given, add:—MEXICO, Jalapa (*Höge*), San Lorenzo near Cordova (*M. Trujillo*), Frontera and Teapa in Tabasco (*H. H. Smith*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Dysdercus flavo-limbatus (p. 230).

To the localities given, add:—MEXICO, Tepic in Jalisco (*Schumann*), San Lorenzo near Cordova (*M. Trujillo*), Jalapa (*Höge*), Orizaba (*H. H. Smith & F. D. G.*), Atoyac in Vera Cruz, Chilpancingo in Guerrero, Teapa in Tabasco (*H. H. Smith*), Temax in North Yucatan (*Gaumer*).

In some specimens the head is castaneous, and in others quite black.

Dysdercus obscuratus (p. 230).

To the localities given, add:—Mexico, Atoyac in Vera Cruz (*Schumann*), Teapa in Tabasco (*H. H. Smith*).

Dysdercus concinnus (p. 231).

To the localities given, add:—Mexico, San Lorenzo near Cordova (*M. Trujillo*), Teapa in Tabasco (*H. H. Smith*); Panama, Bugaba, David (*Champion*).

Dysdercus obliquus (p. 232).

To the localities given, add:—Mexico, Presidio de Mazatlan in Sinaloa (*Forrer*), Tepic in Jalisco (*Schumann*), Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*), Chilpancingo and Xucumanatlan in Guerrero (*H. H. Smith*), Temax in North Yucatan (*Gaumer*); Guatemala, Cerro Zunil and Dueñas (*Champion*); Costa Rica, Caché (*Rogers*); Panama, Bugaba (*Champion*).

Dysdercus chiriquinus (p. 232).

To the locality given, add:—Mexico, Teapa in Tabasco (*H. H. Smith*).

Dysdercus capitatus (p. 233).

To the locality given, add:—Mexico, Temax in North Yucatan (*Gaumer*).

Dysdercus ruficollis (p. 233).

To the localities given, add:—Guatemala, Teleman in Vera Paz (*Champion*); Panama, Bugaba (*Champion*).

We have now received a variety very similar to that figured by Hahn (Wanz. Ins. ii. fig. 123), with the exception that the scutellum, clavus (wholly or part), and the basal half of the pronotum are black, as well as the posterior half of the corium. This variety was found by Mr. Champion at Bugaba and on the Volcan de Chiriqui. In my own collection there are examples of it from Colombia and Brazil.

MIRIS (p. 236).

Miris guatemalanus (p. 236).

To the localities given, add:—Mexico, Omilteme in Guerrero (*H. H. Smith*); Panama, Volcan de Chiriqui 4000 to 5000 feet (*Champion*).

2 (a). **Miris panamensis,** n. sp. (Tab. XXXVI. fig. 8.)

Allied to *M. guatemalanus*, but larger, the pronotum and scutellum more sparingly and finely punctate; apex of the clavus fuscous, a curved inner fuscous streak to corium terminating in a darker fuscous spot near

inner basal angle of cuneus; posterior femora castaneous; apex of the head more produced than in *M. guatemalanus*.

Long. 11–12 millim.

Hab. PANAMA, Volcan de Chiriqui 8000 feet (*Champion*).

Mr. Champion took two examples of this species, and both at the above altitude.

EIONEUS, gen. nov. (To follow the genus *Miris*, p. 237.)

Head long and moderately ascending in front, the apex subacutely produced, the lateral margin between base of antennæ and apex prominently toothed, the basal half with a central narrow longitudinal sulcation; antennæ with the basal joint about as long as the head and pronotum together, incrassated and strongly setose, second joint longer than the first, but shorter than the third. Pronotum much longer than broad, the anterior margin concavely sinuate, the posterior margin strongly concavely sinuate before the base of the scutellum, the anterior area with two fine transverse constrictions. Scutellum with the base convex, a very large and profound fovea at each basal angle, followed by a fine but distinct transverse constriction, the apex nodulose. Posterior legs very long, the femora almost reaching the apex of the membrane, tibiæ long and strongly setose. (Under surface not described owing to specimens being carded.)

The remarkable structure of the scutellum renders this genus very distinct.

1. **Eioneus bilineatus,** n. sp. (Tab. XXXVI. fig. 9.)

Pale ochraceous; eyes black; apex of head and the basal sulcation infuscated; two central indistinct fuscous lines extending through pronotum and scutellum; antennæ with the basal joint dark ochraceous and very strongly setose; posterior tibiæ and base of posterior tarsi very bright castaneous, apices of all the tibiæ black.

Long. 7–8 millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, San Gerónimo and Senahu in Vera Paz (*Champion*); HONDURAS, Ruatan Island (*Gaumer*).

Our collection contained one specimen from each of the above localities.

CREONTIADES (p. 237).

Creontiades rubrinervus (p. 237).

To the localities given, add:—MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*), Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*).

MINYTUS (p. 237).

1 (A). **Minytus bicolor,** n. sp. (Tab. XXXVI. fig. 10.)

Head, pronotum, and scutellum ochraceous; corium dark castaneous speckled with ochraceous; basal margin of cuneus and the membrane brownish ochraceous; body beneath and legs ochraceous. (Antennæ mutilated, the second joint dark castaneous.)

Long. 7 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

A single specimen, in poor condition, constitutes my sole knowledge of this species. It is, however, sufficiently distinct from *M. argillaceus* to make its description necessary.

Besides its different colour, it is separated from that species by having the base of the pronotum more concave and the base of the scutellum more foveate.

COLLARIA.

Collaria, Provancher, Nat. Canad. iv. p. 79 (1872).
Nabidea, Uhler, Proc. Bost. Soc. Nat. Hist. xix. p. 397 (1878); Reuter, Zool. Jahr., Arthr. p. 507 (1879).
Trachelomiris, Reuter, huj. op. p. 238.

I am indebted to Dr. Bergroth for pointing out to me some two years ago that Reuter's genus was preoccupied by that of Provancher, and Dr. Reuter has recently tacitly admitted the same.

1. Collaria oleosa.

Trachelomiris oleosus, huj. op. p. 238, Tab. XXIV. fig. 2.
Collaria oleosa, Reut. Ann. Soc. Ent. Fr. 1892, p. 393[1].

To the localities given, add:—MEXICO, San Lorenzo near Cordova (*M. Trujillo*), Orizaba (*H. H. Smith & F. D. G.*), Fortin in Vera Cruz, Chilpancingo and Tierra Colorada in Guerrero, and Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Dueñas (*Champion*); NICARAGUA, Chontales (*Janson*).—VENEZUELA, Colonia Tovar, San Esteban, Caracas (*Simon*[1]).

XENETUS (p. 239).

Prof. Uhler (Ent. Amer. iii. p. 151) has stated that my genus *Xenetus* "will no doubt prove upon actual comparison of the types to be the same" as *Eucerocoris,* Westw. I can scarcely follow this opinion, as the two genera have not only been fully described, but the types of both have been also figured. The structure of the antennæ alone is sufficient to prevent any confusion.

Eucerocoris, Westw.	*Xenetus,* Dist.
"Antennæ corpore toto fere triplo longiores."	"Antennæ not quite so long as the body."
"Articulis tribus primis longitudine fere æqualibus." (Prof. Westwood's figure shows the basal joint to be about as long as the posterior tibiæ and tarsi together.)	"First joint about as long as the head or longer, second joint three times the length of the first, third about half the length, or nearly as long as the second."

Xenetus lanuginosus (p. 239).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Teleman, Chacoj, Coatepeque (*Champion*); PANAMA, Bugaba (*Champion*).

Xenetus chryselectrus (p. 240).

To the locality given, add:—GUATEMALA, San Gerónimo (*Champion*).

ZACYNTHUS.

Zacorus, huj. op. p. 240 (nomen præocc.).
Zacynthus, huj. op. p. 297, nota.

1. **Zacynthus staphyliniformis.**

Zacorus staphyliniformis, huj. op. p. 240, Tab. XXIV. fig. 5.

2. **Zacynthus curvicornis.**

Zacorus curvicornis, huj. op. p. 241.

ZOSIPPUS (p. 241).

2. **Zosippus fœdus,** n. sp. (Tab. XXXVI. fig. 11.)

Black; eyes, basal joint of antennæ and bases of second and third joints, a short transverse fascia near centre of corium, apices of the tibiæ, posterior margins of the pro- and mesosternum, and a spot near base of abdomen, ochraceous. The body above is very sparingly greyishly pilose.
Long. 4 millim.

Hab. Panama, Bugaba (*Champion*).

This species differs from *Z. inhonestus*, Dist., by the much more profound anterior constriction of the thorax, the more oblique and less conical tubercle to the scutellum, the less pilose body, absence of the apical pale spot to corium, &c. Mr. Champion found a single example.

3. **Zosippus gibbus,** n. sp. (Tab. XXXVI. fig. 12.)

Very pale castaneous; eyes fuscous, the posterior margin of the pronotum very dark violaceous; tubercle to the scutellum dark castaneous; antennæ with the apices of the second and third joints and the whole of the fourth joint pale fuscous; corium with a central transverse curved fascia which is pale ochraceous anteriorly and dark castaneous posteriorly, and with two pale ochraceous spots near base of membrane; cuneus ochraceous, with the basal margin, inner angle, and apex fuscous; base and apex of clavus, a lateral spot beyond centre of corium and inner apical angle and apex of same violaceous; femora ochraceous spotted with castaneous, tibiæ and tarsi brownish-ochraceous; membrane brownish-ochraceous. Tubercle to scutellum large, broad, and upright. (Body beneath imperfectly seen owing to specimens being carded.)
Long. 5 millim.

Hab. Panama, Bugaba (*Champion*).

This species, of which we have received two examples, is distinguished by the large, broad, upright tubercle to the scutellum.

HERDONIUS. (To follow the genus *Zosippus*, p. 241.)

Herdonius, Stål, Rio Jan. Hem. i. p. 55 (1858).

I place the following species in this genus on account of the antennæ being as long as the body, the scutellum possessing an erect spine at the apex, and the abdomen being constricted, though not "fere petiolatum." The shape of the head appears different from the rather meagre description of the same, and the thorax is not "apice capite multo angustior"; but not having seen a typical specimen, and the general

characters agreeing fairly well with Stål's diagnosis, I have refrained from proposing a new genus.

Herdonius was founded for the reception of a single species from Rio Janeiro.

1. **Herdonius (?) panamensis,** n. sp. (Tab. XXXVI. fig. 13.)

Black; corium dark purplish; head, tibiæ, and apices of the femora castaneous; antennæ ochraceous; margins of the lateral angles of the pronotum, apical spine to the scutellum, basal margin of corium, and a transverse central fascia to same and the cuneus greyish-white; membrane dark fuscous, the lateral margins paler; anterior and intermediate femora longly and thickly setose beneath; pronotum thickly and finely punctate.

Long. 5 millim.

Hab. Panama, Bugaba (*Champion*).

A single example in poor condition.

LYGDUS (p. 242).

2. **Lygdus mimicus,** n. sp. (Tab. XXXVI. fig. 14.)

Body above reddish-ochraceous; head, antennæ, a broad subtriangular fascia to pronotum, scutellum, clavus, a broad transverse fascia to corium, cuneus, membrane, body beneath, and legs, black; lateral areas of prosternum, and lateral margins of corium as seen beneath, reddish-ochraceous. The abdomen is convexly rounded and dilated on each side, the lateral margins of the first, second, and third segments extending a little beyond the margins of the corium.

Long. 10 millim.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

This species, of which Mr. Smith sent us a single example, is an extraordinary mimic of a species of the Lygæid genus *Oncopeltus*. The antennæ are less strongly hirsute than in the other species which I described from the State of Panama.

Another species from Venezuela is contained in my collection*.

PIASUS (p. 242).

Piasus illuminatus (p. 242).

To the locality given, add:—Panama, David, Bugaba (*Champion*).

CYLAPUS.

Cylapus, Say, Hem. N. Am. p. 792 (1831); Compl. Writ. i. p. 347 (1869).
Valdasus, Stål, huj. op. p. 243.

Since I wrote on the Capsidæ, Mr. Otto Heidemann (Proc. Ent. Soc. Wash. 1891,

* **Lygdus signoreti,** n. sp.

Black; anterior dilated lateral margins of the pronotum and corium (excluding base and apical marginal area) sanguineous; membrane fuscous, its apical margin paler. Long. 10 millim.—*Hab.* Venezuela, La Guayra (*Sallé*).

A single specimen, given to me by my late friend Dr. Signoret.

p. 68) has recorded his rediscovery of the lost species, *Cylapus tenuicornis*, described by Say, and has given an excellent figure of the same. For the reception of this species Say proposed the generic name *Cylapus*. From a comparison of Mr. Heidemann's figure with those representing species of Stål's genus *Valdasus* in this work, Prof. Uhler (*ibid.* p. 123) has rightly concluded that the two genera are synonymous, and that, despite Say's very meagre diagnosis, the name *Cylapus* must take precedence.

1. **Cylapus famularis.**

Valdasus famularis, huj. op. p. 243, Tab. XXIV. fig. 7.

Prof. Uhler (Proc. Ent. Soc. Wash. 1891, p. 123) has expressed his opinion that this species is really the *Cylapus tenuicornis*, Say, and that therefore Stål's species must sink as a synonym of the same. I was, however, fortunately enabled to figure the type of *C. famularis* in this work (Tab. XXIV. fig. 7), and from a comparison of this with Mr. Heidemann's figure of the North-American species described by Say, I am unable to share Prof. Uhler's opinion. The Mexican species thus appears more elongate and narrow, and the difference of markings may be seen in the corresponding presence and absence of the pale marginal spots to the pronotum of *C. tenuicornis* and the apical claval spot in *C. famularis*. The markings of the scutellum, corium, and cuneus are also different in the two species.

2. **Cylapus stellatus.**

Valdasus stellatus, huj. op. p. 243.

3. **Cylapus marginicollis.**

Valdasus marginicollis, huj. op. p. 243.

4. **Cylapus funebris.**

Valdasus funebris, huj. op. p. 244, Tab. XXIV. fig. 8.

5. **Cylapus erebeus.**

Valdasus erebeus, huj. op. p. 244.

6. **Cylapus cerbereus.**

Valdasus cerbereus, huj. op. p. 244.

7. **Cylapus stygius.**

Valdasus stygius, huj. op. p. 245, Tab. XXIV. fig. 9.

7 (A). **Cylapus picatus,** n. sp. (Tab. XXXVI. fig. 15.)

Body above dark castaneous; head with the face and the area between the eyes ochraceous; antennæ with the basal joint dark castaneous, remaining joints pale fuscous, the apex of the second joint luteous; scutellum with two basal spots and the apex pale ochraceous; corium with a spot on disk, a longitudinal streak near

inner angle, and the basal margin of the cuneus pale ochraceous; membrane fuscous, the veins blackish; body beneath and femora blackish; bases of intermediate and posterior femora and two obscure annulations to same castaneous; tibiæ and tarsi brownish-ochraceous. The head, scutellum, and corium are thickly and coarsely punctate.

Long. 5 millim.

Hab. PANAMA, Bugaba (*Champion*).

Allied to *C. stygius*, Dist., but with the pronotum narrower, and the body much more elongate; the colour of the legs is also a very distinctive character. We have only received one specimen.

8. **Cylapus rugosus.**

Valdasus rugosus, huj. op. p. 245, Tab. XXIV. fig. 10.

9. **Cylapus nubilus,** n. sp.

Body above dark castaneous; antennæ with the basal joint dark castaneous, the remaining joints pale fuscous, apex of the second joint luteous; a small spot on each side of clavus near apex and the basal margin of cuneus pale greyish; membrane fuscous, with the basal cellular area blackish; legs pale castaneous, femora with the base and a subapical annulation luteous, apices of the tarsi luteous.

Long. 4 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This species is allied in general shape and markings to *C. rugosus*, Dist., but differs by its smaller size, narrower body, and the non-rugose corium.

Two examples.

JOBERTUS, gen. nov. (To follow the genus *Cylapus* (*Valdasus*), p. 245.)

Head broad, including the eyes much broader than the anterior margin of the pronotum, transverse, excavated on each side near the eyes, and vertically deflexed in front of same. Antennæ about as long as the body, the basal joint slightly incrassated and a little shorter than the head, second joint about as long as the third and fourth joints together. Pronotum subtriangular, with a broad anterior collar or narrow lobe, the posterior margin convex, and about twice the width of the anterior margin, the lateral angles subprominent, the lateral margins oblique and slightly concave. Scutellum subtriangular, moderately tumid, and with a central basal excavation. Corium with the lateral margins a little widened posteriorly; cuneus very large, about as broad as long; membrane rather small. (Rostrum indescribable owing to the typical specimen being carded.)

1. **Jobertus chryselectrus,** n. sp. (Tab. XXXVI. fig. 16.)

Head black, with an apical and two larger basal ochraceous spots; eyes castaneous; antennæ ochraceous, the first joint (excluding base) black; pronotum black, the lateral margins and angles ochraceous; scutellum ochraceous, with the basal excavation black; corium greenish-ochraceous, with a trilinear black spot at the inner angle; body beneath and legs ochraceous.

Long. 3 millim.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single example.

MONALONION (p. 246).

Monalonion annulipes (p. 246).

Monalonion annulipes, Reuter, Ann. Soc. Ent. Fr. 1892, p. 398 [1].

To the localities given, add:—VENEZUELA, Caracas (*Simon* [1]).

SYSINAS (p. 248).

Sysinas audens (p. 247).

To the localities given, add:—BRAZIL, Therezopolis (*Bruss. Mus.*).

Sysinas floridulus (p. 249).

To the locality given, add:—MEXICO, Atoyac in Vera Cruz (*Schumann*).

4 (A). **Sysinas affinis,** n. sp.

Allied to *S. centralis,* but differing by the anterior area of the head being wholly ochraceous, the lateral margins of the corium and cuneus concolorous, not luteous; the tibiæ and a subapical annulation to the femora black.

Long. 4½ millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Mr. Smith only procured a single specimen of this species.

ZOILUS.

Zopyrus, huj. op. p. 249 (nomen præocc.).
Zoilus, huj. op. p. 297, nota.

1. **Zoilus rubromaculatus.**

Zopyrus rubromaculatus, huj. op. p. 250, Tab. XXV. fig. 8.

2. **Zoilus luteofasciatus.**

Zopyrus luteofasciatus, huj. op. p. 250, Tab. XXV. fig. 9.

3. **Zoilus marginatus,** n. sp. (Tab. XXXVI. fig. 18.)

Black; head, pronotal collar, and a broad central fascia to pronotum—narrowed posteriorly—pale sanguineous; third and fourth joints of antennæ, legs, and the lateral margins to corium and cuneus ochraceous, the last with their extreme outer edge black; femora with a subapical indistinct fuscous annulation.

Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

Our collection contains but one specimen.

4. **Zoilus guerreroensis,** n. sp. (Tab. XXXVI. fig. 17.)

Black; head and a central longitudinal fascia to pronotum—widest anteriorly—ochraceous; anterior tibiæ with a narrow, and intermediate and posterior tibiæ with a broad subapical greyish annulation; antennæ with

the basal joint black (remaining joints mutilated); eyes dark fuscous; pronotum, scutellum, and corium very thickly and coarsely punctate.
Long. $7\frac{1}{2}$ millim.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*).

A single example.

5. **Zoilus ater,** n. sp.

Black; eyes brownish; head broader than in *Z. guerreroensis*, Dist.; eyes more prominent; pronotum broader, shorter, and with the lateral margins less oblique.
Long. 8 millim.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*).

A single example.

6. **Zoilus fuligineus,** n. sp. (Tab. XXXVI. fig. 19.)

Black; eyes brownish-ochraceous; corium with an obscure castaneous shading; membrane fuscous, the venation black.
Long. 6 millim.

Hab. MEXICO, Xucumanatlan in Guerrero (*H. H. Smith*).

This species differs from *Z. ater* by its much narrower body, resembling in that respect *Z. luteofasciatus*.

Mr. Smith has only sent us a single example.

Division **CLIVINEMARIA.** (To precede the Division *Loparia*, p. 251.)

Clivinemaria, Reuter, Öfv. Vet.-Ak. Förh. 1875, no. 9, p. 62.

This division, proposed by Dr. Reuter for the reception of a Texan genus and species, appears to me the most natural position for the following genus. The characters on which I rely are "caput, pronotum et scutellum dense et longe tomentosa," and also the peculiar structure of the pronotum.

RANZOVIUS, gen. nov.

Head, pronotum, and scutellum longly pilose. Head foveate between the eyes. Antennæ setose, more than half the length of the body, the first and second joints strongly incrassated, first joint a little shorter than the head, second considerably longer than the first, third and fourth joints slender, and together a little longer than the second joint. Pronotum broader at base than at apex, profoundly foveate on the anterior area, and causing the anterior margin to be somewhat tumid. Corium sparingly pilose; the cuneus a little longer than broad; posterior tibiæ longly setose.

1. **Ranzovius crinitus,** n. sp. (Tab. XXXVI. fig. 20.)

Head, pronotum, and scutellum black, thickly, longly, and more palely pilose; eyes and the first and second joints of the antennæ castaneous, third joint of the last ochraceous, fourth joint pale fuscous; corium pale castaneous, sparingly greyishly pilose; cuneus dark castaneous, its basal, inner, and apical margins

greyish-white; membrane hyaline, mottled with pale fuscous; femora castaneous, their apices and the tibiæ ochraceous; posterior tibiæ more or less annulated with fuscous; body beneath dark castaneous or fuscous.

Long. 2 millim.

Hab. MEXICO, Orizaba in Vera Cruz, Omilteme in Guerrero (*H. H. Smith*).

Mr. Smith sent us seven specimens of the above, but these being all carded and more or less imperfect, has rendered both the generic and specific diagnosis difficult.

RESTHENIA (p. 251).

Resthenia plagigera (p. 251).

To the localities given, add:—MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Cahabon in Vera Paz (*Champion*).

3 (A). **Resthenia trujilloi,** n. sp. (Tab. XXXVI. fig. 21.)

Head, pronotum, scutellum, base of corium, and body beneath sanguineous; eyes, two central spots to pronotum, and the corium black; membrane fuscous; legs dull ochraceous, femora speckled with fuscous, tibiæ much shaded with fuscous, tarsi fuscous; antennæ with the basal joint ochraceous, remainder black; tibiæ very densely pilose; rostrum not quite reaching the intermediate coxæ.

Long. 9 millim.

Hab. MEXICO, San Lorenzo near Cordova (*M. Trujillo*).

A single example.

Resthenia ornaticollis (p. 253).

Capsus bicinctus, Walk. Cat. Het. vi. p. 100. 186[1].

To the locality given, add:—MEXICO, Oaxaca (*Sallé*), Tepic (*Schumann*).

The form described by Walker as above only differs from *R. ornaticollis* by having the black basal area to the pronotum notched, and not completely divided by ochraceous. I had omitted to record and identify this description of Walker when I wrote previously, and have to thank Dr. Bergroth for recently requesting me to do so.

Resthenia latipennis (p. 253).

Resthenia univittata, huj. op. p. 253.

The examination of a long series of specimens, which were not available when the above species were enumerated, has convinced me that *R. univittata* is only another varietal form of *R. latipennis.* The colour of the head is inconstant, and varies from black to ochraceous in specimens from the same locality.

To the localities given, add:—MEXICO, Milpas in Durango (*Forrer*), San Lorenzo near Cordova (*M. Trujillo*), Atoyac, Fortin, and Orizaba in Vera Cruz, Rincon, R. Papagaio, Tepetlapa, and Tierra Colorada in Guerrero, Teapa in Tabasco (*H. H. Smith*).

Resthenia erubescens (p. 254).

To the localities given, add:—MEXICO, Acaguizotla, Chilpancingo, and Tepetlapa in Guerrero (*H. H. Smith*).

15 (A). **Resthenia schumanni,** n. sp. (Tab. XXXVI. fig. 22.)

Head, basal joint of antennæ, pronotum, scutellum, body beneath, and the femora sanguineous; eyes, apex of head, corium, tibiæ, tarsi, and antennæ (excluding basal joint) black; lateral margin of the corium broadly stramineous; membrane fuscous. Rostrum about reaching the intermediate coxæ, with its apex black. Tibiæ longly and finely setose.

Long. 10 millim.

Hab. MEXICO, Tepic in Jalisco (*Schumann*).

We have received a single example of this species, which is allied to *R. högbergi*, Stål, from which it differs by the absence of the black fascia to the pronotum, different colour of the femora, &c.

15 (B). **Resthenia accincta,** n. sp. (Tab. XXXVI. fig. 23.)

Head black; pronotum reddish-ochraceous, with a broad central longitudinal fuscous fascia; scutellum, corium, and membrane black, lateral margins of corium stramineous, basal angles of scutellum reddish-ochraceous; antennæ dark fuscous, basal third of first joint stramineous. Body beneath and legs ochraceous; apex of abdomen, apices of the tibiæ, and the tarsi black.

Long. 6 millim.

Hab. PANAMA, David (*Champion*).

A single example of this species was obtained by Mr. Champion.

16 (A). **Resthenia pannosa,** n. sp. (Tab. XXXVI. fig. 24.)

Dull black; lateral margins of the pronotum (excluding lateral angles) dull purplish; corium with very dull and obscure purplish shadings; membrane fuscous, the veins black. Rostrum reaching the intermediate coxæ; basal joint of the antennæ slightly longer than the head.

Long. 8 millim.

Hab. MEXICO, Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*).

My knowledge of the species is confined to a single specimen captured at Orizaba.

Resthenia plena (p. 255).

To the locality given, add:—MEXICO, Temax in North Yucatan (*Gaumer*).

Resthenia bicolor (p. 256).

To the locality given, add:—MEXICO, Dos Arroyos in Guerrero (*H. H. Smith*).

Resthenia vitticeps (p. 256).

To the locality given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*).

Resthenia vittifrons (p. 257).

To the locality given, add:—MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*).

It is very doubtful whether this and the preceding species (*R. vitticeps*) are really distinct, a doubt shared by Stål.

Resthenia persignanda (p. 257).

To the locality given, add:—GUATEMALA, Cerro Zunil (*Champion*).

Resthenia exornata (p. 257).

To the locality given, add:—MEXICO, Xucumanatlan in Guerrero (*H. H. Smith*).

25 (A). **Resthenia teapensis,** n. sp. (Tab. XXXVI. fig. 25.)

Body above, antennæ, legs, and rostrum black; body beneath sanguineous; base of first joint of antennæ ochraceous; lateral margins of head, continued along inner margins of eyes, reddish-ochraceous; pronotal collar sanguineous, basal margin of pronotum dull ochraceous; prosternum with a large spot on each lateral margin posteriorly margined with ochraceous. Rostrum about reaching the posterior coxæ.
Long. 8 millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Allied to both *R. vitticeps* and *R. vittifrons*, Stål, from which it differs by the colour of the head, absence of the anterior fascia to the pronotum, &c.

One example.

27 (A). **Resthenia intercidenda,** n. sp. (Tab. XXXVII. fig. 1.)

Black; inner margins of eyes and base of head, pronotal collar, lateral margins of pronotum and a central discal fascia to same, scutellum, and body beneath sanguineous; coxæ, legs, and apex of abdomen black. Antennæ with the first and second joints black (remainder mutilated).
Long. 6 millim.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

We possess a single carded specimen.

LOPIDEA (p. 258).

Lopidea scitula (p. 258).

Var. ... Pronotum and corium without, or almost without, the central black markings.

To the localities given, add:—MEXICO, Amula, Chilpancingo, Omilteme, and Xucumanatlan in Guerrero (*H. H. Smith*).

3. **Lopidea mexicana,** n. sp. (Tab. XXXVII. fig. 2.)

Sanguineous; eyes, antennæ, tibiæ, tarsi, and membrane dark fuscous. The pronotum is much sculptured, being channelled near the anterior and lateral margins; the legs are finely and longly setose.
Long. 7 millim.

Hab. MEXICO, Venta de Zopilote in Guerrero (*H. H. Smith*).

This insect, of which we have received a single specimen only, is allied in general coloration to the two Nearctic species, *L. confluens* and *L. media* (Say), from both of which, however, it is quite distinct.

4. **Lopidea bicolor,** n. sp. (Tab. XXXVII. fig. 3.)

Black; pronotum reddish-ochraceous, with a central black lineate spot near anterior margin. The basal margin of the pronotum is very concavely excavated at base; the corium is obscurely pilose; the third joint of the antennæ is slightly longer than the second.

Long. 4 millim.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

Four examples.

COMPSOCEROCORIS (p. 260).

2 (a). **Compsocerocoris præsignis,** n. sp. (Tab. XXXVII. fig. 4.)

Ochraceous; eyes, four elongate discal spots to pronotum and the lateral angles of same, two lateral spots before the apex of scutellum, clavus, inner area of corium and a series of small marginal spots to same, inner and outer basal angles of cuneus and two spots on inner margin of same, fuscous; apex of corium and inner margin of cuneus more or less suffused with carmine-red; membrane pale fuscous, with greyish-white spots; antennæ ochraceous, the basal joint mottled with fuscous, second joint with the base stramineous followed by fuscous and the apex fuscous, third and fourth joints fuscous, with their bases greyish-white; legs ochraceous, more or less mottled with fuscous, apices of the tarsi fuscous.

Long. 6–7 millim.

Hab. Mexico, Amula and Chilpancingo in Guerrero, Teapa in Tabasco (*H. H. Smith*).

In some specimens the discal spots to the pronotum are obsolete or entirely absent. Four specimens have been examined.

Compsocerocoris annulicornis (p. 261).

To the localities given, add:—Mexico, Amula and Omilteme in Guerrero, Teapa in Tabasco (*H. H. Smith*); Guatemala, Capetillo, Aceituno (*Champion*).

Compsocerocoris mistus (p. 262).

To the localities given, add:—Mexico, Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*), Xucumanatlan in Guerrero (*H. H. Smith*); Guatemala, Quiché Mts. 7000 to 9000 feet (*Champion*).

NEUROCOLPUS (p. 262).

Neurocolpus mexicanus (p. 262).

Neurocolpus affinis, huj. op. p. 263.

To the localities given, add:—Mexico, Presidio de Mazatlan in Sinaloa (*Forrer*), Amula in Guerrero, Vera Cruz, Teapa and Frontera in Tabasco (*H. H. Smith*); Guatemala, Capetillo (*Champion*); Panama, David, Taboga Island (*Champion*).

I had already (p. 263) queried *N. affinis* as "n. sp. or var.?", and the subsequent examination of a long series of specimens has shown me its truly varietal character.

PŒAS, gen. nov. (To follow the genus *Neurocolpus*, p. 263.)

Body broad and robust; head a little longer than broad, and triangularly pointed at apex; antennæ with the basal joint longer than the head and very strongly incrassated, second joint slender, twice as long as the first, and with its apex slightly thickened, third and fourth joints subequal in length. Pronotum anteriorly deflexed and with a broad anterior collar, twice as broad at base as at apex, truncate at base of scutellum and obliquely rounded to lateral angles, which are subprominent, lateral margins very slightly concave. Scutellum tumid. Posterior femora strongly incrassated; tibiæ finely setose.

1. **Pœas reuteri,** n. sp. (Tab. XXXVII. fig. 5.)

Pale ochraceous; scutellum, clavus (excluding apex), apical half of corium, basal angle and apex of cuneus, apical third of posterior femora, apices of the anterior and intermediate tibiæ, base of the posterior tibiæ, and the tarsi, pale castaneous. Antennæ with the first and second joints ochraceous, apical third of the second joint and the third and fourth joints fuscous, base of the third joint stramineous; scutellum with a spot near basal angles, and a central fascia widened posteriorly, ochraceous.

Long. 7 millim.

Hab. PANAMA, Bugaba (*Champion*).

A single specimen is all that Mr. Champion obtained of this species, which has a very Coreid appearance.

PARACALOCORIS (p. 263).

Paracalocoris jurgiosus (p. 263).

To the localities given, add:—MEXICO, Acaguizotla, Hacienda de la Imagen, Rincon, and Tierra Colorada in Guerrero (*H. H. Smith*).

Paracalocoris fistulosus (p. 264).

To the localities given, add:—MEXICO, Chilpancingo and Venta de Zopilote in Guerrero (*H. H. Smith*).

I am now able to describe the antennæ of this species, which were mutilated in the type:—

Antennæ fuscous; a broad annulation near the base of second joint, and the base of the third joint, ochraceous.

Paracalocoris molliculus (p. 265).

To the locality given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*).

Paracalocoris lunatus (p. 265).

To the locality given, add:—GUATEMALA, El Jicaro in Vera Paz (*Champion*).

I have now seen a second example of this species.

9. **Paracalocoris bivittatus,** n. sp. (Tab. XXXVII. fig. 6.)

Pale brownish, ochraceously pilose; antennæ with the first and second joints reddish-ochraceous, the apex of the second joint infuscated, remaining joints stramineous; eyes and a broad claval vitta on each side dark fuscous; membrane pale fuscous, with a large greyish spot on each lateral margin; body beneath, legs, and apex of scutellum ochraceous; cuneus dark castaneous, with its apex ochraceous.
Long. 6 millim.

Hab. Mexico, Omilteme in Guerrero (*H. H. Smith*).

A single example.

PAPPUS (p. 266).

2. **Pappus insignis,** n. sp. (Tab. XXXVII. fig. 7.)

Ochraceous, somewhat thickly pilose; eyes, a large discal spot to corium, and the cuneus fuscous; legs and antennæ castaneous, tarsi and membrane pale ochraceous.
Long. 4 millim.

Hab. Panama, David (*Champion*).

One example.

3. **Pappus egens,** n. sp. (Tab. XXXVII. fig. 8.)

Black; corium castaneous and ochraceously pilose; head between the eyes, antennæ, basal margin of pronotum, apex of scutellum, extreme lateral margins of corium, and legs ochraceous; cuneus bright castaneous; membrane pale fuscous.
Long. 4 millim.

Hab. Panama, Bugaba (*Champion*).

Two examples. In both *P. insignis* and *P. egens* the third joint of the antennæ is considerably longer than the fourth.

GARGANUS (p. 266).

Garganus albidivittis (p. 266).

To the localities given, add :—Mexico, Orizaba (*H. H. Smith & F. D. G.*), Atoyac and Fortin in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); Nicaragua, Chontales (*Janson*).

2. **Garganus splendidus,** n. sp. (Tab. XXXVII. fig. 9.)

Head black; pronotum pale olivaceous, with two large basal subquadrate black spots; scutellum pale olivaceous; corium reddish-ochraceous, bases of clavus continued as two discal longitudinal fasciæ to membrane black; membrane black, the margins somewhat paler; legs reddish-ochraceous, with the apices of the tarsi fuscous; antennæ with the basal joint ochraceous, the second, third, and fourth joints black, base of the third joint stramineous. Body beneath black; prosternum, lateral margins of mesosternum, anterior and intermediate coxæ, and bases of femora very pale olivaceous, base and lateral margins of the abdomen sanguineous.
Long. 5 millim.

Hab. Mexico, Rincon, Tierra Colorada and Venta de Zopilote in Guerrero (*H. H. Smith*).

We have received a fair series of this prettily-marked species.

JACCHINUS, gen. nov. (To follow the genus *Garganus*, p. 266.)

Head rather longer than broad, with a very faint central linear sulcation; eyes well separated from the anterior margin of the pronotum; antennæ with the first joint moderately curved and incrassated, and about as long as the pronotum, second joint nearly twice as long as the first and attenuated at the base, third joint slightly longer than the first, fourth about half the length of third. Pronotum with the base about twice the width of the anterior margin, the lateral margins moderately concave. Scutellum gibbous, the disk tubercularly elevated. Cuneus moderately long. Posterior legs long, the tibiæ finely setose.

I have been compelled to propose a new genus for the reception of the following species, as to the proper position for which I am at present very doubtful. The tubercular scutellum is a salient characteristic, whilst the faintly sulcated head exhibits a relationship with the genera I have placed at the commencement of the Capsidæ. As, however, the aim of this work is faunistic rather than classificatory, I have temporarily placed *Jacchinus* near *Garganus*.

1. **Jacchinus tabascoensis,** n. sp. (Tab. XXXVII. fig. 10.)

Head, pronotum, body beneath, and legs sanguineous; eyes, scutellum, corium, and cuneus black; antennæ castaneous, apex of the first joint and base of the second black, second joint annulated near base with reddish-ochraceous, and base of third joint of that colour; the posterior tibiæ and apices of the femora castaneous; membrane fuscous.

Long. 6 millim.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

Two examples.

CALOCORIS (p. 266).

5 (A). **Calocoris (?) canus,** n. sp. (Tab. XXXVII. figg. 11, ♂; 12, ♀.)

♂. Shining black; corium and scutellum thickly greyishly pilose; cuneus fuscous, with the inner margin and apex greyish-white; membrane fuscous, with the margins paler; legs and antennæ ochraceous; base and apex of the second joint of the antennæ, apex of the third, and the whole of the fourth joint, posterior femora (excluding apices), bases of the posterior tibiæ and the apices of the tarsi black; inner margin of the legs ochraceous.

♀. Short, broad, and subovate; membrane rudimentary or absent, leaving the apex of the abdomen exposed; colour-markings as in the other sex, but the corium and scutellum generally less thickly greyishly pilose.

Long. ♂ 3, ♀ 2 millim.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*); Guatemala, near the city, Dueñas, Cerro Zunil, Senahu (*Champion*); Nicaragua, Chontales (*Janson*).

We have received a long series of specimens of this species, especially from Guatemala, but mostly in an immature condition. I should have refrained from sexually differentiating and describing the undeveloped forms of this species, had not Mr. Champion, their collector, expressed his opinion that they were undoubtedly females. A similar instance occurred with a species from Ecuador, which I described under the name of *Calocoris montanus* *, but which I have not ventured to sexually diagnose.

Calocoris nigricans (p. 267).

To the locality given, add:—Mexico, Omilteme in Guerrero (*H. H. Smith*).

In some specimens the cuneus is castaneous in hue.

* Trans. Ent. Soc. 1893, p. 89.

STHENAROPS. (To follow the genus *Calocoris*, p. 267.)

Sthenarops, Uhler, Bull. U.S. Geol. & Geogr. Surv. iii. p. 418 (1877).

Sthenarops is closely allied to *Calocoris*, and includes a species I formerly placed with doubt in that genus.

1. **Sthenarops malina.**

Sthenarops malina, Uhler, Bull. U.S. Geol. & Geogr. Surv. iii. p. 419. 2 [1].
Calocoris (?) *inustus*, huj. op. p. 267, Tab. XXIII. fig. 17 [2].
Calocoris inustus, Uhler, Check-List Hem. Het. p. 18, 870 (1886).

To the locality previously given [2], add:—NORTH AMERICA, Eastern Massachusetts, New York, Pennsylvania, Maryland, Ohio, Southern Illinois, Texas [1].—MEXICO, Chilpancingo and Tepetlapa in Guerrero (*H. H. Smith*).

There is scarcely a doubt that the Mexican Capsid I described as above [2] is the widely-distributed North-American species described by Prof. Uhler, though that author has included my species under the genus *Calocoris* in his Check-List. It seems that both Prof. Uhler and myself have committed an oversight.

MEGACŒLUM (p. 269).

2. **Megacœlum (?) sanguinolentum,** n. sp. (Tab. XXXVII. fig. 13.)

Very pale ochraceous; scutellum with two black spots near the apex, which is sanguineous; head with a rounded linear sanguineous spot in front of the eyes; pronotum and corium much suffused with sanguineous, the first with a narrow subbasal broken linear dark sanguineous fascia; membrane pale fuscous; body beneath and legs pale ochraceous; apex of the rostrum fuscous (imperfectly seen in carded specimens).

Long. 8 millim.

Hab. MEXICO, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

We have received two specimens of this species, which I place in the genus *Megacœlum* principally on account of the structure of the apex of the scutellum, which is deflexed and curved downwardly. It is allied to the other species here described, *M.* (?) *signatum*, Dist., by the spots to the scutellum, but differs by the more parallel lateral margins of the corium, the sanguineous shadings, the colour of the membrane, &c.

PROBA (p. 269).

Proba gracilis (p. 269).

To the localities given, add :—MEXICO, Omilteme in Guerrero (*H. H. Smith*); GUATEMALA, San Gerónimo (*Champion*).

In its melanic forms, this species is a close mimic of *Lygus tribulis*, Dist.

PARAPROBA (p. 270).

Paraproba fasciata (p. 270).

To the localities given, add :—MEXICO, Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*),

Omilteme and Chilpancingo in Guerrero (*H. H. Smith*); GUATEMALA, Quiché Mts. (*Champion*).

NEOPROBA (p. 270).

3. **Neoproba notata,** n. sp. (Tab. XXXVII. fig. 14.)

Ochraceous; apex and basal margin of head, lateral and basal margins of pronotum, central fascia to scutellum, outer claval margins, a rounded spot near centre of corium, apex of cuneus, and the body beneath black; anterior margin of prosternum and the legs ochraceous; antennæ variable in hue, either wholly ochraceous or with the first and second joints fuscous. Tibiæ obscurely setose.

Long. $3\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 4000 feet, Bugaba (*Champion*).

Mr. Champion obtained nine specimens of this species.

PANDAMA (p. 271).

Pandama præclara (p. 271).

To the locality given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*).

2. **Pandama aurea,** n. sp. (Tab. XXXVII. fig. 15.)

Pale golden-yellow; eyes and lateral margins of head, basal joint and apex of second joint of antennæ, a central basal fascia to pronotum, apex of scutellum, and extreme inner margins of corium dark fuscous; membrane very pale ochraceous, with darker shadings.

Long. 4 millim.

Hab. GUATEMALA, Las Mercedes (*Champion*).

A single example.

LYGUS (p. 272).

Lygus pratensis (p. 272).

To the localities given, add:—MEXICO, Orizaba (*H. H. Smith & F. D. G.*), Fortin in Vera Cruz, Xucumanatlan in Guerrero, Teapa in Tabasco (*H. H. Smith*).

Lygus tribulis (p. 273).

To the locality given, add:—MEXICO, Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*), Omilteme and Xucumanatlan in Guerrero (*H. H. Smith*).

As previously remarked, this species has a strong mimetic resemblance to dark specimens of *Proba gracilis*, Dist.

3 (A). **Lygus tactilis,** n. sp. (Tab. XXXVII. fig. 16.)

Ochraceous; inner and sutural margins of clavus, a large spot near middle of lateral margins to corium, apical margins of corium before cuneus, and apex of cuneus dark castaneous; membrane pale smoky hyaline, basal cellular margins and the apex fuscous; antennæ with the first and second joints fuscous, basal half of second joint ochraceous (remaining joints mutilated); body beneath and legs ochraceous, apices of the posterior femora, and bases and apices of the posterior tibiæ dark castaneous.

Long. 5 millim.

Hab. PANAMA, Peña Blanca (*Champion*).

A single carded specimen represents our knowledge of this species.

3 (B). **Lygus panamensis,** n. sp. (Tab. XXXVII. fig. 17.)

Allied to *L. tactilis*, but differing by its smaller size, the whole disk of the pronotum (excluding the lateral and posterior margins) black, the scutellum with a large triangular black basal spot, and the second joint of the antennæ with the base only narrowly ochraceous.

Long. 4½ millim.

Hab. PANAMA, Peña Blanca (*Champion*).

Three examples.

Lygus sallæi (p. 273).

Lygus championi, huj. op. p. 273.

To the localities given, add:—MEXICO, Cuernavaca in Morelos (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. G.*), Atoyac and Fortin in Vera Cruz, Chilpancingo, Omilteme, and Xucumanatlan in Guerrero (*H. H. Smith*).

From the present examination of a very long series of Mexican specimens, I find that the Guatemalan form cannot be separated as a distinct species. Its size alone is not sufficient, as some of the Mexican examples equal it in that respect.

4 (A). **Lygus godmani,** n. sp.

Ochraceous or pale olivaceous-green, the corium finely greyishly pilose; antennæ ochraceous, the third and fourth joints pale fuscous, second joint about as long as the intermediate tibiæ or to the third and fourth joints together; extreme apex of the cuneus and the apices of the tarsi black; membrane pale fuscous, with darker shadings; eyes fuscous.

Long. 5–5½ millim.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. G.*), Atoyac in Vera Cruz, Omilteme and Xucumanatlan in Guerrero, Teapa in Tabasco (*H. H. Smith*).

Allied to *L. sallæi*, but differing by the more elongate body, the colour of the antennæ, &c.

We have received a fair series of specimens.

4 (B). **Lygus uvidus,** n. sp. (Tab. XXXVII. fig. 18.)

Pale greenish-ochraceous; third and fourth joints of the antennæ, inner claval margin, and a large rounded spot near centre of corium fuscous; membrane pale hyaline, the inner and apical areas and a spot on outer area fuscous; second joint of the antennæ about equal in length to the third and fourth joints together.

Var. *a*. Scutellum and the whole of clavus fuscous.

Long. 3½ millim.

Hab. MEXICO, Tierra Colorada and Venta de Zopilote in Guerrero, Teapa in Tabasco (*H. H. Smith*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

7 (A). **Lygus sparsus,** n. sp. (Tab. XXXVII. fig. 19.)

Creamy-white; antennæ, legs, and body above minutely speckled with pale castaneous; apices of the femora castaneous; eyes fuscous; membrane pale greyish-white; cuneus shaded with pale castaneous.

Long. 3 millim.

Hab. GUATEMALA, San Gerónimo and San Joaquin in Vera Paz (*Champion*).

One specimen from each of the above localities constitutes my knowledge of this species.

8. **Lygus distanti.**

Lygus distanti, Atkins. Cat. Capsidæ, p. 92.

Lygus scutellaris, huj. op. p. 274, Tab. XXIII. figg. 9, 18.

To the localities given, add:—MEXICO, Orizaba (*H. H. Smith & F. D. G.*), Atoyac in Vera Cruz (*Schumann*).

The late Mr. Atkinson included the *Orthops scutellatus* of Uhler in the genus *Lygus*, and proposed the above name to relieve the incidental synonymy.

Lygus cristatus (p. 274).

To the localities given, add:—MEXICO, Orizaba (*H. H. Smith & F. D. G.*), Fortin in Vera Cruz, Chilpancingo and Xucumanatlan in Guerrero, Teapa in Tabasco (*H. H. Smith*); PANAMA, Bugaba (*Champion*).

10. **Lygus pellitus,** n. sp. (Tab. XXXVII. fig. 20.)

Ochraceous; eyes, the first joint, apical half of second joint, and apices of third and fourth joints of antennæ, lateral areas of scutellum, corium (excluding lateral margins), apex of cuneus, and membrane very dark fuscous; lateral margins of membrane with some pale spots; posterior femora (excluding base) castaneous. The corium is thickly and longly pilose, and the second joint of the antennæ is slightly longer than the third and fourth joints together.

Var. *a.* Clavus, but only the inner angle of corium, fuscous.

Long. 4 millim.

Hab. MEXICO, Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*), Teapa in Tabasco (*H. H. Smith*)

Three examples.

11. **Lygus hospitus,** n. sp. (Tab. XXXVII. fig. 21.)

Ochraceous; eyes and the apex of cuneus fuscous; a basal discal spot to pronotum, two subapical spots to scutellum, clavus (excluding apex), a transverse fascia at apex of corium, apices of the posterior femora, and apex of the second joint of antennæ pale castaneous; apices of the tarsi fuscous. The corium is moderately pilose.

Long. $3\frac{1}{2}$ millim.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

A single example.

12. **Lygus ordinatus,** n. sp. (Tab. XXXVII. fig. 22.)

Body above brownish-ochraceous, corium and the lateral margins of the pronotum thickly and longly pilose; eyes and antennæ black; body beneath and legs pale ochraceous; tibiæ and the apices of the femora spotted with black; apices of the tarsi black; membrane very pale fuscous, darker at base.

Long. 3½ millim.

Hab. MEXICO, Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*).

A single example.

13. **Lygus lanuginosus,** n. sp. (Tab. XXXVII. fig. 23.)

Pale brown, ochraceously pilose; eyes, apical half of second joint, and third and fourth joints of antennæ fuscous; cuneus and apices of the femora pale castaneous; membrane fuscous, the margins pale hyaline. The second joint of the antennæ is about equal in length to the third and fourth joints together.

Long. 3 millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single example.

14. **Lygus cuneatus,** n. sp. (Tab. XXXVII. fig. 24.)

Piceous; a spot at inner margin of eyes, anterior and posterior margins of pronotum, and an anterior discal spot to same, two apical spots to scutellum, and margins of cuneus ochraceous; antennæ ochraceous, apices of the second and third joints, and the whole of the fourth joint black or fuscous; membrane dark fuscous, the margins paler; cuneus dark castaneous; femora castaneous; tibiæ and tarsi ochraceous, the first speckled with fuscous, apices of the tarsi black.

Var. *a.* Basal angle of corium and central fascia to scutellum ochraceous.

Long. 3 millim.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. G.*), Atoyac in Vera Cruz, Chilpancingo in Guerrero, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Cerro Zunil (*Champion*); NICARAGUA, Chontales (*Janson*).

PŒCILOCAPSUS (p. 274).

Pœcilocapsus agrarius (p. 275).

Var. *c.* Body above wholly piceous, the head only ochraceous.

Var. *d.* Body above wholly piceous, the lateral and posterior margins of the pronotum ochraceous.

Var. *e.* Resembling var. *d*, but with a central longitudinal ochraceous fascia to the pronotum.

To the localities given, add:—MEXICO, Venta de Zopilote in Guerrero (*H. H. Smith*); GUATEMALA, Quiché Mts. (*Champion*).

Pœcilocapsus nigriger (p. 275).

To the locality given, add:—MEXICO, Jalapa in Vera Cruz (*Höge*), Chilpancingo and Omilteme in Guerrero (*H. H. Smith*).

Pœcilocapsus ornatulus (p. 276).

To the localities given, add:—MEXICO, Fortin in Vera Cruz, Chilpancingo, Omilteme, Venta de Zopilote, and Xucumanatlan in Guerrero (*H. H. Smith*).

6. **Pœcilocapsus mollis,** n. sp. (Tab. XXXVII. fig. 25.)

Ochraceous; eyes, two central fasciæ and the lateral angles to pronotum, central fascia to the scutellum, inner apical margins of clavus, lateral margins and a large elongate triangular fascia and a small spot at base of corium, and inner margin and apex of cuneus, black or dark fuscous; membrane fuscous; antennæ black, more than basal half of second joint and base of third joint ochraceous. Body beneath and legs ochraceous, apices of the tibiæ and the tarsi black.

Var. *a.* Scutellum and corium black, outer margins of clavus, a longitudinal streak to corium and cuneus, and the outer margin of the last ochraceous; bases and apices of the femora black.

Long. 7–9 millim.

Hab. Mexico, Chilpancingo in Guerrero (*H. H. Smith*).

We have received six examples from Mr. Smith.

7. **Pœcilocapsus scutellatus,** n. sp. (Tab. XXXVII. fig. 26.)

Head and pronotum ochraceous, the eyes fuscous; antennæ reddish-ochraceous, the second joint with the apical third black, third joint stramineous with the apex black, fourth joint black with the base stramineous; pronotum with the base (excluding extreme margin), and a transverse fascia on anterior area, dark castaneous; scutellum and corium castaneous, olivaceously pilose, the apex of the scutellum, lateral margins of the corium, and base and inner basal margin of the cuneus ochraceous, cuneus and membrane pale fuscous; body beneath and legs ochraceous.

Long. 6 millim.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

Three examples.

RHASIS, gen. nov. (To follow the genus *Pœcilocapsus*, p. 276.)

Body broad and posteriorly ovately dilated; antennæ with the basal joint about as long as the head, and moderately thickened, second joint about half as long again as the first, third and fourth together a little longer than the second joint. Pronotum about twice as broad at base as at apex and finely punctate; the posterior margin sinuated, the lateral margins slightly convex and somewhat laminate on the anterior half, the disk with two transverse linear foveæ on anterior area. Scutellum moderately tumid and transversely wrinkled. Corium thickly punctate, widened and convexly rounded towards apex, the lateral margins almost impunctate. Cuneus very broad at the base, and about as long as broad. Membrane short, not reaching the apex of the abdomen. Tibiæ finely setose.

1. **Rhasis amplificatus,** n. sp. (Tab. XXXVIII. fig. 1.)

Head, pronotum, antennæ, body beneath, and legs ochraceous; eyes, third and fourth joints and apical half of second joint of antennæ, scutellum, and corium dark fuscous; lateral margins of corium and cuneus, and basal angles and apex of scutellum, ochraceous; membrane pale hyaline, reflecting the dark abdomen beneath; tibial setæ pale fuscous.

Long. 5 millim.

Hab. Mexico, Omilteme in Guerrero (*H. H. Smith*).

We have received a single example of this species.

NEOBORUS (p. 276).

2 (a). **Neoborus fasciatus,** n. sp. (Tab. XXXVIII. fig. 2.)

Ochraceous; eyes, antennæ, two transverse fasciæ to pronotum—one on anterior area, the other basal—lateral

angles of scutellum, clavus (excluding apex), inner area and extreme outer margin of corium, and the membrane dark fuscous; legs pale ochraceous, apical annulations to femora, the tibiæ, and the tarsi pale fuscous; apex of the third joint of the antennæ ochraceous.
Long. 5 millim.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*); PANAMA, David (*Champion*).

One example from each of the above localities; the Mexican specimen is here figured.

Neoborus hirsutus (p. 276).

To the locality given, add :—PANAMA, Bugaba (*Champion*).

A second specimen of this species has now passed through my hands.

4. **Neoborus crassus,** n. sp. (Tab. XXXVIII. fig. 3.)

Head, pronotum, and scutellum dull ochraceous; eyes, anterior margin of pronotum, and disk of scutellum fuscous; corium castaneous, mottled with greyish, and pilose; clavus (excluding base and apex) very dark shining castaneous; cuneus pale bright castaneous; membrane very pale brownish, with an apical black spot; antennæ with the first and second joints reddish-ochraceous, the third joint stramineous, its apex and the fourth joint fuscous. The pronotum and scutellum are coarsely punctate and rugulose, and the basal angles of the scutellum are distinctly foveate.
Long. 5 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 feet (*Champion*).

A single example.

5. **Neoborus manifestus,** n. sp. (Tab. XXXVIII. fig. 4.)

Ochraceous; basal angles of scutellum, a large central elongate spot to clavus, a central transverse fascia to corium, cuneus, body beneath, and annulations to femora castaneous; between the transverse fascia and the inner angle of corium is a connecting purplish spot; antennæ ochraceous, the third and fourth joints and the apex of the second joint fuscous; membrane fuscous, with the venation and marginal spots greyish; basal margin and apex of cuneus greyish.
Long. 5 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

A single example.

6. **Neoborus funereus,** n. sp. (Tab. XXXVIII. fig. 5.)

Brownish-ochraceous mottled with castaneous, sparingly greyishly pilose; head, a central fascia and posterior margin to pronotum, basal angles of scutellum, and the antennæ ochraceous; antennæ with the fourth joint and the apex of the second joint fuscous, third joint stramineous; cuneus bright castaneous; membrane pale fuscous, the base and apex black; body beneath and legs dark castaneous.
Long. 5 millim.

Hab. GUATEMALA, Las Mercedes (*Champion*).

We only possess a single specimen of this species.

NEOCAPSUS (p. 277).

2. **Neocapsus cuneatus,** n. sp. (Tab. XXXVIII. fig. 6.)

Black; pronotum (excluding base) and cuneus (excluding inner margin and basal angle) reddish-ochraceous. The anterior area of the pronotum is somewhat castaneous in hue; the pronotum and corium are coarsely punctate, the last most thickly so; the scutellum is irregularly transversely striate.

Long. 7 millim.

Hab. MEXICO, Acaguizotla in Guerrero (*H. H. Smith*).

We have received a single example of this species, which differs from *N. mexicanus*, Dist., by the broader body, the colour of the cuneus, &c.

HORCIAS (p. 277).

Horcias chiriquinus (p. 278).

The figure (Tab. XXVI. fig. 15) referred in error to *H. thoracicus* should be applied to this species.

4 (A). **Horcias mexicanus,** n. sp. (Tab. XXXVIII. fig. 7.)

Head, pronotum, scutellum, body beneath, and legs reddish-ochraceous; eyes, corium, and apices of femora, tibiæ, and tarsi black; antennæ ochraceous, apical halves of the first and second joints fuscous; membrane dark fuscous.

Long. 6 millim.

Hab. MEXICO, Tierra Colorada in Guerrero (*H. H. Smith*).

Mr. Smith sent us a single specimen of this species.

Horcias decoratus (p. 278).

To the locality given, add:—MEXICO, Atoyac in Vera Cruz and Teapa in Tabasco (*H. H. Smith*).

Horcias plagosus (p. 279).

To the locality given, add:—MEXICO, Frontera and Teapa in Tabasco (*H. H. Smith*); PANAMA, Bugaba, Tolé (*Champion*).

7 (A). **Horcias plausus,** n. sp. (Tab. XXXVIII. fig. 8.)

Pale greyish; head, anterior margin of pronotum and two discal spots to same, scutellum (excluding lateral margins), clavus, two oblique fasciæ to corium (the outermost shortest), and apex of cuneus bright carmine-red; membrane greyish, its base, apical margin, and a discal spot pale fuscous; antennæ fuscous, basal joint, a central annulation to second joint, base of third joint, and the apical joint ochraceous. Body beneath and legs ochraceous; sternum shaded with carmine (imperfectly seen owing to specimen being carded); femora and legs annulated with carmine; apices of the tarsi fuscous.

Long. 5 millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single example.

Horcias atratus (p. 280).

Var. *a*. Femora ochraceous.

To the locality given, add:—PANAMA, Bugaba, Tolé (*Champion*).

CALOCORISCA (p. 280).

3 (A). **Calocorisca tenebrosa,** n. sp. (Tab. XXXVIII. fig. 9.)

Head and pronotum ochraceous, apex of head, a central line to same, and the eyes fuscous; antennæ usually fuscous, the basal joint and base and apex of the second joint ochraceous (sometimes the second joint is wholly ochraceous); pronotum with the anterior marginal area fuscous, and with two shining black, rounded, macular callosities, basal marginal area more or less shaded with black; scutellum and corium either black slightly mottled with ochraceous, or ochraceous thickly mottled with black, the corium always with a distinct discal black oblique spot margined with ochraceous, and its lateral margin spotted with ochraceous; apex of scutellum ochraceous; membrane brownish-ochraceous shaded with fuscous. Body beneath black, margins of the abdomen and legs ochraceous, the legs spotted with fuscous.

Long. 9 millim.

Hab. MEXICO, Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*), Omilteme in Guerrero (*H. H. Smith*); GUATEMALA, Volcan de Agua 8500 to 10,000 feet (*Champion*).

We have received two specimens from Guatemala and two from Mexico. *C. tenebrosa* is allied to *C. tenera* by the two callosities to the pronotum, but is of a larger size, with completely different colour and markings.

3 (B). **Calocorisca chontalensis,** n. sp. (Tab. XXXVIII. fig. 10.)

Head and antennæ ochraceous, the eyes fuscous; apex of the second joint of the antennæ fuscous (remaining joints mutilated); pronotum and corium ochraceous, very thickly mottled with dark fuscous, pronotum with two rounded black macular callosities near anterior margin; scutellum ochraceous, the lateral margins and a central fascia black. Body beneath and legs dull ochraceous, the latter more or less distinctly annulated with fuscous.

Long. 6 millim.

Hab. NICARAGUA, Chontales (*Janson*).

We possess a single (carded) specimen in rather poor condition.

CIMATLAN (p. 281).

2. **Cimatlan minuens,** sp. n. (Tab. XXXVIII. fig. 11.)

Castaneous, sparingly greyishly pilose or tomentose; eyes and margins and apex of cuneus fuscous; antennæ ochraceous, apex of the second joint fuscous; legs ochraceous.

Long. 4 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

One example.

3. **Cimatlan pertingens,** n. sp. (Tab. XXXVIII. fig. 12.)

Very bright shining castaneous, cuneus paler; membrane pale fuscous, the cellular areas darker; eyes, antennæ, and legs ochraceous; antennæ with the apex of the second joint fuscous (third and fourth joints mutilated).

Long. 3 millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Two examples.

FULVIUS (p. 281).

Fulvius anthocorides (p. 281).

To the localities given, add:—GUATEMALA, Volcan de Atitlan and Pantaleon (*Champion*).

Fulvius fuscans (p. 282).

Var. *a*. Second joint of the antennæ with the apex broadly ochraceous.

To the locality given, add:—GUATEMALA, Cerro Zunil (*Champion*); PANAMA, Bugaba (*Champion*).

Fulvius atratus (p. 282).

Fulvius atratus, var., Reut. Ann. Soc. Ent. Fr. 1892, p. 391 [1].

To the locality given, add:—VENEZUELA, Colonia Tovar (*Simon* [1]).

ECCRITOTARSUS (p. 283).

1 (A). **Eccritotarsus vultuosus**, n. sp. (Tab. XXXVIII. fig. 13.)

Purplish-black; head, sternum, and legs ochraceous; abdomen sanguineous; antennæ, posterior tibiæ (excluding bases), apices of the anterior and intermediate tibiæ and tarsi, and apex of the abdomen black.
Long. 5 millim.

Hab. MEXICO, Frontera and Teapa in Tabasco (*H. H. Smith*).

Two examples.

Eccritotarsus splendens (p. 284).

Eccritotarsus splendens, Reut. Ann. Soc. Ent. Fr. 1892, p. 393 [1].

To the locality given, add:—VENEZUELA, Caracas (*Simon* [1]).

Eccritotarsus pallidirostris (p. 285).

To the localities given, add:—MEXICO, Cordova (*Sallé*), Atoyac and Fortin in Vera Cruz, Teapa in Tabasco (*H. H. Smith*).

Eccritotarsus incurvus (p. 285).

Physetonotus (*Orinonotus*) *incurvus*, Reut. Ann. Soc. Ent. Fr. 1892, p. 396 [1].

To the localities given, add:—MEXICO, Guanajuato (*Dugès, Bruss. Mus.*), Teapa in Tabasco (*H. H. Smith*); GUATEMALA, San Isidro (*Champion*).

Mexican specimens are smaller than the Guatemalan types; the smallness of the first has also been remarked by Dr. Reuter [1]. That authority on the Capsidæ has proposed

a new genus, "*Physetonotus*," for some of these species; but it is better not to disturb our present arrangement, especially as I have previously denoted a distinct section of *Eccritotarsus* for their reception.

8 (A). **Eccritotarsus porrectus,** n. sp. (Tab. XXXVIII. fig. 15.)

Black, more or less greyish-pilose; antennæ, two small marginal spots to corium (the one near apex duplex), and legs pale ochraceous, third and fourth joints of antennæ somewhat infuscated; eyes dark castaneous; cuneus (excluding basal margin) and the membrane pale ochraceous-hyaline, basal margin of cuneus broadly black; apices of the tarsi fuscous.

Var. *a*. Posterior femora and bases of posterior tibiæ black.

Long. 4–4½ millim.

Hab. MEXICO, Orizaba in Vera Cruz (*H. H. Smith & F. D. G.*), Omilteme in Guerrero (*H. H. Smith*); GUATEMALA, Capetillo, Cerro Zunil (*Champion*).

Differs from *E. incurvus* by its greater width, less gibbous pronotum, smaller marginal spots to corium, and by the broad black base to cuneus.

9 (A). **Eccritotarsus impavidus,** n. sp. (Tab. XXXVIII. fig. 14.)

Head, pronotum, scutellum, and clavus black, clavus with an ochraceous spot on each side; corium pale ochraceous; a subclaval and transverse fascia and inner angles and apex of cuneus black. Body beneath black; legs, antennæ, and membrane pale ochraceous, the last with the cellular areas fuscous.

Long. 3½ millim.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

A single example.

Eccritotarsus atratus (p. 285).

Physetonotus (*Physetonotus*) *atratus*, Reut. Ann. Soc. Ent. Fr. 1892, p. 395 [1].

To the locality given, add:—MEXICO, Vera Cruz, Frontera and Teapa in Tabasco (*H. H. Smith*); GUATEMALA, San Isidro (*Champion*); NICARAGUA, Chontales (*Janson*).—VENEZUELA, Caracas (*Simon* [1]).

11. **Eccritotarsus perobscurus,** n. sp. (Tab. XXXVIII. fig. 16.)

Black; head castaneous; antennæ and legs ochraceous; basal joint, apical halves of second and third joints and the fourth joint of antennæ, posterior femora (excluding apices), and the apices of the tarsi black; pronotum, scutellum, and cuneus shining black, corium dull opaque; membrane pale hyaline, with the basal cells black.

Var. *a*. Head black.

Long. 3 millim.

Hab. MEXICO, near the city (*H. H. Smith*); GUATEMALA, San Gerónimo (*Champion*).

We have received a single example from each of the above localities. The type from Guatemala is here figured.

12. **Eccritotarsus tenebrosus,** n. sp.

Allied to the preceding species, but with the body, antennæ, and legs wholly black; bases of the tarsi ochra-

ceous. The body is rather narrower and more elongate, the corium a little more pilose, and the second joint of the antennæ slightly shorter.

Long. 3 millim.

Hab. GUATEMALA, near the city and Panajachel (*Champion*).

Three examplès.

13. **Eccritotarsus nocturnus,** n. sp.

Allied to the two preceding species, but differing by the body being greyish-pilose and the antennæ and legs wholly pale ochraceous.

Long. 3 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*); PANAMA, Bugaba (*Champion*).

Three examples.

14. **Eccritotarsus marginatus,** n. sp. (Tab. XXXVIII. fig. 17.)

Black, more or less greyish-pilose; antennæ, bases of the femora, tibiæ (excluding bases), tarsi, sublateral margins of the corium, and the membrane pale ochraceous; apical joint of the antennæ and the apices of the tarsi infuscated; basal central spot to membrane black.

Long. 3 millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Six examples.

15. **Eccritotarsus procurrens,** n. sp. (Tab. XXXVIII. fig. 18.)

Black; eyes dark castaneous; legs pale ochraceous; antennæ black, bases of the first, second, and third joints ochraceous; membrane pale hyaline, with its basal half black; pronotum long, elongated, the anterior collar very wide, the lateral angles acutely recurved.

Long. 4 millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Senahu, San Isidro (*Champion*); PANAMA, Bugaba (*Champion*).

We have received a very long series of this species from Mr. Smith, which he obtained at Teapa. In six specimens found by Mr. Champion in Guatemala and the State of Panama the anterior area of the head is castaneous and the femora and tibiæ are also more or less marked with the same colour. The species is always to be known by the elongated pronotum.

MONALOCORISCA (p. 286).

1 (A). **Monalocorisca tuberculata,** n. sp. (Tab. XXXVIII. fig. 19.)

Ochraceous, mottled with castaneous; two small raised central black tubercles on anterior area of the pronotum; two brownish spots near apex of scutellum; cuneus ochraceous, with an apical and two basal castaneous spots; membrane ochraceous, the venation castaneous, and with a pale spot near apex; anterior and posterior margins of the pronotum and the apex of the scutellum very pale ochraceous. Body beneath and legs ochraceous; tibiæ with a central and apical annulation and the tarsi fuscous.

Long. 4 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

A single example.

3. **Monalocorisca lineata,** n. sp. (Tab. XXXVIII. fig. 20.)

Brownish ochraceous, somewhat thickly pilose; margins of pronotum and a narrow central fascia to both pronotum and scutellum pale ochraceous; apex of head and legs fuscous; cuneus fuscous, its outer and posterior margins ochraceous. Body beneath and legs fuscous; apices of the femora and the anterior and intermediate tibiæ ochraceous, the last with a basal fuscous annulation; antennæ ochraceous, apex of the second joint fuscous (third and fourth joints mutilated); membrane pale fuscous.

Long. 4 millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single example.

4. **Monalocorisca laterata,** n. sp. (Tab. XXXVIII. fig. 21.)

Dark castaneous; a broad sublateral fascia to corium, lateral angles of pronotum, eyes, and the legs ochraceous; femora (excluding apices) fuscous; basal joint of antennæ fuscous (remainder mutilated); membrane pale fuscous, the cellular areas dark fuscous. The body is sparingly pilose, the head and anterior area of pronotum very thickly so.

Long. $3\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

A single example in poor condition.

5. **Monalocorisca emissitia,** n. sp. (Tab. XXXVIII. fig. 22.)

Brownish-ochraceous; two irregular central fasciæ to pronotum, inner margins of clavus, a transverse spot near centre of corium and a spot at inner angle of same, body beneath, and femora fuscous; cuneus castaneous; antennæ, lateral angles of corium, apices of femora, and the tibiæ ochraceous; base of first joint, apex of second joint, and third and fourth joints (excluding bases) of antennæ fuscous; eyes dull dark greyish. Body finely and sparingly pilose.

Long. 4 millim.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. G.*); BRITISH HONDURAS, R. Hondo (*Blancaneaux*).

One specimen from each of the above localities.

6. **Monalocorisca colorata,** n. sp. (Tab. XXXVIII. fig. 23.)

Ochraceous; eyes, third and fourth joints and the apex of the second joint of the antennæ, clavus (excluding base and apex), and a short submarginal fascia to corium, between which and clavus there is an indistinct fascia, fuscous; cuneus castaneous; membrane smoky-hyaline with fuscous shadings. Body sparingly and finely greyish-pilose.

Long. 4 millim.

Hab. MEXICO, Orizaba (*H. H. Smith & F. D. G.*).

One example, difficult to describe owing to the markings of the corium being more developed on one side than on the other.

7. **Monalocorisca scutellata,** n. sp. (Tab. XXXVIII. fig. 24.)

Black; head, anterior area of pronotum, prosternum, legs, and scutellum ochraceous, the last with a central longitudinal black fascia; membrane pale fuscous; femora castaneous; antennæ ochraceous, apex of the second joint and the whole of the third and fourth joints fuscous.

Long. 4 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 feet (*Champion*).

One example in poor condition.

CARMELUS.

Carnus, huj. op. p. 287 (nomen præocc.).
Carmelus, huj. op. p. 297, nota.

1. **Carmelus lunatus.**

Carnus lunatus, huj. op. p. 287, Tab. XXVIII. fig. 6.

2. **Carmelus formosus.**

Carnus formosus, huj. op. p. 287.

3. **Carmelus parvus.**

Carnus parvus, huj. op. p. 287, Tab. XXVIII. fig. 7.

3 (A). **Carmelus fasciatus,** n. sp. (Tab. XXXVIII. fig. 25.)

Ochraceous; eyes and pronotal collar very pale sanguineous; some minute spots between the eyes, a central spot near pronotal collar, centre of posterior margin to pronotum, inner margin of clavus, a transverse fascia near base of corium, inner apical margins of corium, venation to membrane, a subbasal annulation to posterior tibiæ, and apex of first joint and the whole of second joint (excluding base) of antennæ fuscous or castaneous (third and fourth joints of antennæ mutilated).

Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

A single example.

3 (B). **Carmelus sanguineus,** n. sp. (Tab. XXXIX. fig. 1.)

Pale sanguineous; eyes fuscous; antennæ and legs pale ochraceous; membrane pale fuscous, with the venation darker; spots to meso- and metasternum black; posterior femora spotted with sanguineous.

Long. 3 millim.

Hab. PANAMA, Bugaba (*Champion*).

A single example.

4. **Carmelus funebris.**

Carnus funebris, huj. op. p. 288.

To the locality given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*).

I have now seen two specimens of this species, one from the State of Panama and the other from Mexico.

5. **Carmelus eminulus,** n. sp.

Black or dark shining castaneous; head brownish-ochraceous, the eyes black; antennæ ochraceous, first joint, apical half of second joint, and apices of third and fourth joints black; legs brownish-ochraceous; membrane dark fuscous, the margins pale smoky hyaline; lateral angles of the pronotum slightly produced and recurved.

Long. $2\frac{1}{2}$ millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Three examples.

PARACARNUS (p. 289).

2. **Paracarnus mexicanus,** n. sp. (Tab. XXXIX. fig. 2.)

Head, pronotum, and clavus ochraceous; pronotal collar and scutellum very pale ochraceous; corium very pale stramineous; eyes, apices of the second and third joints and the whole of the fourth joint of antennæ, basal margin of scutellum, two small spots at apex of clavus, a narrow transverse fascia at apex of corium, and the venation to membrane fuscous. Body beneath ochraceous; legs stramineous.

Long. 4 millim.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single example.

ANNONA.

Ania, huj. op. p. 289 (nomen præocc.).

Annona, huj. op. p. 297, nota.

Dr. Reuter (Ann. Soc. Ent. Fr. 1892, p. 401), in recording this genus from Venezuela, remarks as to its position "Genus divisionis *Dicypharia* nec *Phytocoraria*!" If the reference is intended to apply to this publication, where the genus was founded—and I know of no other—then Dr. Reuter must have hurriedly consulted what I have written, for the genus was not placed in *Phytocoraria*, but in a combination of three of Dr. Reuter's own divisions (p. 283), taken from his memoir on North-American Capsidæ, and apparently almost where he now retains it—near his *Cyllocoraria.*

1. **Annona bimaculata.**

Ania bimaculata, huj. op. p. 290, Tab. XXVII. fig. 25.

Annona bimaculata, var., Reut. Ann. Soc. Ent. Fr. 1892, p. 401 [1].

To the localities given, add:—MEXICO, Orizaba (*H. H. Smith & F. D. G.*), Fortin and Atoyac in Vera Cruz, Cuernavaca in Morelos, Amula and Chilpancingo in Guerrero, Teapa in Tabasco (*H. H. Smith*).—VENEZUELA, Caracas (*Simon* [1]).

2. **Annona decoloris.**

Ania decoloris, huj. op. p. 290, Tab. XXVI. fig. 23.

3. **Annona labeculata,** n. sp. (Tab. XXXIX. fig. 3.)

Head and pronotum ochraceous; eyes, posterior margin of pronotum, scutellum, and basal half of clavus dark castaneous; corium, membrane, antennæ, body beneath, and legs very pale ochraceous.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

A single example.

NEOFURIUS (p. 292).

Neofurius variabilis (p. 292).

To the localities given, add:—MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Cahabon in Vera Paz (*Champion*); PANAMA, Peña Blanca (*Champion*).

2 (A). **Neofurius pollutus,** n. sp. (Tab. XXXIX. fig. 4.)

Head and basal joint of antennæ sanguineous, eyes and second joint of antennæ black; pronotum black, anterior collar and a broad basal fascia sanguineous; scutellum and clavus black; corium and membrane pale ochraceous, a large irregular black spot at inner angles of corium connected with lateral margins by a sanguineous spot; body beneath and legs pale ochraceous, sternum black.

Long. 4 millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

From each of the above localities we have received a single specimen; the one from Chiriqui is here figured; the Mexican example has the sanguineous markings almost obliterated and replaced by ochraceous.

6 (A). **Neofurius tabascoensis,** n. sp. (Tab. XXXIX. fig. 5.)

Creamy-white; pronotum pale ochraceous; first and second joints of antennæ, eyes, scutellum, bases of clavus, an irregular transverse fascia to corium, inner margins of cuneus, venation to membrane, bases and apices of anterior and intermediate tibiæ, posterior femora and tibiæ, the apices of the tarsi, and two lateral sternal spots, black; bases of the posterior femora and a subapical annulation to the posterior tibiæ ochraceous.

Long. 5 millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

A single specimen.

14 (A). **Neofurius marginatus,** n. sp. (Tab. XXXIX. fig. 6.)

Very pale ochraceous; eyes and the apex of the second joint of antennæ black (third and fourth antennal joints mutilated); basal joint of antennæ, basal half of lateral margins to corium, and the posterior femora bright sanguineous.

Long. 4 millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

This species is allied to *N. pallidulus*, Dist., from which it not only differs in the diverse colour-markings, but also in having the corium much more angulated near the base. Mr. Smith sent us a single specimen.

BIBACULUS (p. 295).

Bibaculus modestus (p. 296).

To the localities given, add:—MEXICO, Fortin in Vera Cruz (*H. H. Smith*).

NEOSILIA.

Silia, huj. op. p. 296 (nomen præocc.).
Neosilia, huj. op. p. 297, nota.

4. **Neosilia pulchra**, n. sp. (Tab. XXXIX. fig. 7.)

Very pale stramineous; eyes, posterior margin of collar and a transverse linear spot at each lateral angle of pronotum, scutellum (excluding two central spots), inner margin and apex of clavus, a large spot at inner angles of corium, outer margin of cuneus, and apex of tarsi black; membrane smoky-hyaline, with the veins fuscous; antennæ ochraceous, the third and fourth joints and the apex of the second joint black.
Var. *a*. Pronotum immaculate.
Long. 5 millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

We have altogether examined six specimens of this species.

5. **Neosilia modesta**, n. sp.

Very pale stramineous; eyes, antennæ, and the tarsi black; an anterior pronotal fascia behind the collar, basal angle of scutellum, and basal margin and apex of cuneus pale fuscous.
Long. 4½ millim.

Hab. GUATEMALA, near the city (*Champion*).

A single example.

NEOLEUCON (p. 299).

Neoleucon horribilis (p. 300).

To the locality given, add:—GUATEMALA, Teleman in Vera Paz (*Champion*).

JORNANDES (p. 301).

2. **Jornandes præustus**, n. sp. (Tab. XXXIX. fig. 8.)

Black; lateral angles of pronotum, basal third of corium, apex of cuneus, legs, and antennæ ochraceous; apices of the tibiæ black; the corium is somewhat thickly pilose *; the membrane pale ochraceous, showing the dark abdomen beneath.

* In describing the genus *Jornandes* from the type, its only representative then known, I stated that the upper surface was glabrous. This was true then, but from a subsequent knowledge of other species must now be described as glabrous or pilose.

Var. *a*. Corium with only the extreme base ochraceous.
Long. 2 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Three examples.

3. **Jornandes punctatus,** n. sp. (Tab. XXXIX. fig. 9.)

Black, shining; membrane with the margins pale fuscous; tarsi ochraceous, with their apices black. The pronotum and corium are very thickly and finely punctate and the scutellum is transversely wrinkled; the apex of the third joint of the antennæ is brownish (fourth joint mutilated).
Long. 5 millim.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

One specimen.

4. **Jornandes subalbicans,** n. sp. (Tab. XXXIX. fig. 10.)

Black; thickly greyish-pilose, cuneus somewhat darker in hue; membrane fuscous; legs and antennæ black, the tibiæ and third joint of the antennæ somewhat fuscous; extreme apex of cuneus greyish-white.
Long. 4 millim.

Hab. MEXICO, Amula in Guerrero (*H. H. Smith*).

Two examples.

5. **Jornandes cruralis,** n. sp. (Tab. XXXIX. fig. 11.)

Black, glabrous; head ochraceous, with the eyes black; legs and antennæ pale stramineous; first joint of the antennæ black at base; membrane dark fuscous, lateral margins greyish.
Long. $4\frac{1}{2}$ millim.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

A single example.

6. **Jornandes dissimulans,** n. sp. (Tab. XXXIX. fig. 12.)

Black, shining, glabrous; legs and antennæ ochraceous, third and fourth joints and apex of the second joint of the antennæ, femora (excluding apices), and apices of the tibiæ black; membrane dark fuscous, black at base, the margins paler.
Long. $3\frac{1}{2}$ millim.

Hab. MEXICO, Amula in Guerrero (*H. H. Smith*).

A single example.

7. **Jornandes vulgaris,** n. sp. (Tab. XXXIX. fig. 13.)

Black; the corium pitchy-brown, sparingly greyish-pilose, the base continued in a submarginal fascia ochraceous; cuneus castaneous; membrane pale smoky hyaline, with the base black; legs and antennæ ochraceous, the femora (excluding apices), and the third and fourth joints and the apex of the second joint of antennæ, black.
Var. *a*. Base of corium only ochraceous.
Long. 3 millim.

Hab. MEXICO, Chilpancingo in Guerrero, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Cerro Zunil (*Champion*).

Five examples.

8. **Jornandes intermedius,** n. sp. (Tab. XXXIX. fig. 14.)

Black, somewhat thickly greyish-pilose; head ochraceous, with a basal spot and the eyes black; legs and antennæ pale stramineous; membrane pale hyaline, the black abdomen reflected at base.
Long. $2\frac{1}{2}$ millim.

Hab. MEXICO, Omilteme in Guerrero, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Cerro Zunil (*Champion*).

This species, of which we have received eight examples, is intermediate between *J. subalbicans* and *J. cruralis*. To the first it is allied by the greyish-pilose body, while it resembles the second in the colour of the head, legs, and antennæ. From both it is distinct by its smaller size, different colour of the membrane, &c.

9. **Jornandes parvus,** n. sp.

Black, shining, sparingly pilose; eyes castaneous; legs and antennæ pale ochraceous; basal halves of anterior and intermediate femora, posterior femora (excluding apices), and posterior tibiæ (excluding bases and apices) black; membrane pale fuscous, darker at base.
Long. 2 millim.

Hab. GUATEMALA, Purula, San Gerónimo (*Champion*).

Four examples.

10. **Jornandes semirasus,** n. sp. (Tab. XXXIX. fig. 15.)

Head, antennæ, legs, corium, and membrane ochraceous; pronotum, scutellum, a broad posterior lateral fascia to corium, the body beneath, and apices of the tarsi black. The corium is very sparingly pilose, and the pronotum and scutellum are coarsely and thickly punctate.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo, Panajachel (*Champion*).

Four examples.

11. **Jornandes lautus,** n. sp. (Tab. XXXIX. fig. 16.)

Ochraceous; scutellum, posterior apical margin to corium, and body beneath black; eyes castaneous; membrane pale ochraceous; antennæ ochraceous (the third and fourth joints mutilated). The body above is somewhat coarsely punctate and sparingly pilose.
Long. 3 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

A single example.

FICINUS, gen. nov. (To follow the genus *Jornandes*, p. 301.)

Body elongate, depressed, lateral margins of the corium nearly straight. Head broad at the base and vertically deflexed. Antennæ inserted a little before the eyes, the basal joint not quite as long as the head and

moderately incrassated, second joint more than twice the length of the first, third and fourth joints together about equal in length to the second joint. Pronotum about as long as broad, somewhat flat, the posterior margin a little broader than the anterior margin, the lateral angles moderately produced and subacute, the lateral margins a little concave. Claval suture half as long again as the scutellum. Cuneus broader than long. Femora moderately incrassated; tibiæ very finely setose. Membrane broad. Rostrum about reaching the intermediate coxæ.

1. **Ficinus sagittarius,** n. sp. (Tab. XXXIX. fig. 17.)

Black; eyes castaneous; antennæ, clavus (excluding base), apical margin of corium, and the legs ochraceous; membrane dark cupreous, the base more or less ochraceous.

Var. *a*. Clavus and corium black and unicolorous.

Long. 5 millim.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

Six examples.

CYRTOCAPSUS.

Cyrtocapsus, Reuter, Öfv. Vet.-Ak. Förh. 1875, no. 9, p. 78; Ann. Soc. Ent. Fr. 1892, p. 393 [1].

Pirithous, Dist. huj. op. p. 302.

Dr. Reuter has pointed out [1] the priority of his genus, which I failed to recognize when I previously enumerated the Capsidæ.

1. **Cyrtocapsus caligineus.**

Capsus caligineus, Stål, Freg. Eug. Resa, Ins. p. 258 [1].

Cyrtocapsus caligineus, Reut. Öfv. Vet.-Ak. Förh. 1875, no. 9, p. 79 [2]; Uhler, List Hem.-Het. N. Am. p. 19, 935 [3]; Atkins. Cat. Capsid. p. 42 [4]; Reut. Ann. Soc. Ent. Fr. 1892, p. 394 [5].

Pirithous pallipes, Dist. huj. op. p. 302, Tab. XXIX. fig. 11 [6].

Hab. NORTH AMERICA, Western States [3], California [1 2 4].—MEXICO, Atoyac in Vera Cruz and Teapa in Tabasco (*H. H. Smith*); GUATEMALA, San Gerónimo [6], El Jicaro, Cerro Zunil (*Champion*).

AUCHUS, gen. nov. (To follow the genus *Eurotas*, p. 303.)

Body elongate and subovate. Head short, broad, deflected in front of eyes. Antennæ inserted in front of the eyes, with the first and second joints large, spatulate and foliaceous; first joint longer than the head, dilated on each side, truncate inwardly and broadly convex outwardly; second joint more than half as long again as the first, broadly convex outwardly and attenuated at extreme base; third and fourth joints very slender, third longer than fourth. Pronotum somewhat triangular, coarsely punctate, deflected towards apex, which possesses a prominent double collar. Scutellum moderately large, triangular. Corium talc-like, with its lateral margins slightly convex. (Rostrum inaccessible, owing to the typical specimen being carded.)

I have provisionally placed this genus near *Eurotas* and *Lampethusa*, to both of which it is allied by the strongly dilated antennæ. This arrangement, however, is only one of convenience, as it is not attempted to rigidly classify the Neotropical Capsidæ in this work, the aim of which is primarily faunistic.

1. **Auchus foliaceus,** n. sp. (Tab. XXXIX. fig. 18.)

Ochraceous; eyes black: antennæ with the first and second joints sanguineous and foliaceous; scutellum black, with a broad central ochraceous fascia; clavus (excluding base) and inner margin of corium black; body beneath and legs ochraceous.

Long. 5 millim.

Hab. PANAMA, Bugaba (*Champion*).

Mr. Champion found a single specimen only of this extraordinary Capsid.

LAMPETHUSA (p. 303).

Lampethusa anatina (p. 303).

To the locality given, add:—MEXICO, Atoyac in Vera Cruz, Frontera and Teapa in Tabasco (*H. H. Smith*); GUATEMALA, San Gerónimo (*Champion*); PANAMA, Bugaba (*Champion*).

This species is a close mimic of *Paracalocoris attenuatus*, Dist., and is almost only distinguished by the widely different structure of the basal joint of the antennæ. It varies in hue, many specimens being much darker than the type here figured.

DEMARATA (p. 303).

Demarata villosa (p. 303).

To the locality given, add:—MEXICO, Cuernavaca in Morelos, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Cerro Zunil (*Champion*).

This species proves to be very variable in colour. The head is sometimes ochraceous, and the antennæ are either ochraceous with the apical joint and the apex of the third joint fuscous, or altogether ochraceous or fuscous.

2. **Demarata mirifica,** n. sp. (Tab. XXXIX. fig. 19.)

Head and pronotum castaneous; corium and cuneus pale ochraceous; eyes, apices of the second, third, and fourth joints of antennæ, scutellum (excluding basal angles), and base of cuneus black; body beneath and legs pale ochraceous; lateral margins of sternum and abdomen broadly black; apices of posterior femora pale castaneous. The corium is somewhat thickly pilose; the antennæ are moderately short, with the third and fourth joints together about equal in length to the second joint.

Long. 3 millim.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

A single example.

APPENDIX.

THIS Appendix is chiefly devoted to the descriptions of some genera and species and the enumeration of others which have either escaped attention or reached us since we previously worked at the families to which they belong. As far as this work is concerned we now definitely conclude our enumeration and descriptions of the families Pentatomidæ, Coreidæ, Lygæidæ, Pyrrhocoridæ, and Capsidæ of Central America.

AMNESTUS (p. 307).

2. **Amnestus forreri,** n. sp.

Castaneous, the head, anterior lobe of pronotum, and scutellum generally darker in hue; legs and posterior sublateral margins of corium ochraceous; head with the usual marginal spines, including four spines to the apex of the central lobe; pronotum with a very strong transverse incision, in front of which the surface is moderately convex and glabrous and sparingly coarsely punctate, the posterior lobe thickly and coarsely punctate; scutellum and corium coarsely punctate, the posterior disk of the corium impunctate; membrane pale hyaline and very long; antennæ pitchy; body beneath very dark castaneous.

Long. $2\frac{1}{2}$–3 millim.

Hab. MEXICO, Ventanas in Durango (*Forrer*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

This species differs from the description of *A. brunneus*, Sign., the only other Mexican species described, in the profound transverse incision to the pronotum.

We have received six examples from Mexico and one from the State of Panama.

3. **Amnestus signoreti,** n. sp.

Black; lateral and frontal margins of head, lateral margins of pronotum and corium, legs, and antennæ pale castaneous. Head with the usual frontal and lateral spines; head, pronotum, scutellum, and corium thickly and coarsely punctate; pronotum with a somewhat obscure transverse incision; membrane pale hyaline, ochraceous at base.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Quiché Mts. 7000 to 9000 feet (*Champion*).

The thickly and coarsely punctured upper surface and the pale castaneous lateral margins are the salient features of this species, of which we possess only a single example.

4. **Amnestus championi,** n. sp.

Head, pronotum, and scutellum purplish black; corium ochraceous, with a large blackish spot near base and a much more obscure spot near apex; membrane pale hyaline; body beneath castaneous; the legs and antennæ dark ochraceous. The pronotum is very coarsely and thickly punctate and subrugulose, with an obscure, sinuated, transverse incision; the scutellum is very thickly and coarsely punctate, the corium much more finely punctate; head with the frontal spines much more developed than the lateral ones.

Long. 3 millim.

Hab. GUATEMALA, Zapote (*Champion*).

A species to be superficially known by the distinct markings of the corium. Mr. Champion found a single specimen.

5. **Amnestus dallasi,** n. sp.

Black; antennæ, eyes, lateral margins of the pronotum, a broad sublateral fascia to the corium, and the legs pale castaneous; membrane pale ochraceous and subhyaline, the base and apex very pale castaneous. Head coarsely punctate, with the frontal and marginal spines well developed; pronotum with an obscure transverse incision, the anterior lobe with a few scattered discal punctures, and thickly and coarsely punctate at the lateral margins, posterior lobe and scutellum thickly and coarsely punctate; corium more finely punctate, the posterior discal and marginal area impunctate.

Long. 5 millim.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

A single example.

6. **Amnestus uhleri,** n. sp.

Head, pronotum, and scutellum dark castaneous; antennæ, lateral angles of pronotum, corium, and legs ochraceous; apical margins of the corium dark castaneous; membrane pale hyaline. Head with the apex of the anterior lobe distinctly produced and well separated from the lateral lobes, the spines long and distinct, the lateral spines small; pronotum with the anterior half almost impunctate, the posterior area and the scutellum somewhat thickly and coarsely punctate; corium most thickly punctate on the claval and basal areas.

Long. 5 millim.

Hab. GUATEMALA, Zapote (*Champion*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Four examples.

7. **Amnestus bergrothi,** n. sp.

Allied to the preceding species, *A. uhleri*, but smaller, the anterior lobe of the pronotum more punctate; apical margin of the corium concolorous, the lateral spines of the head much longer and equal in length to those of the frontal lobe.

Long. 3 millim.

Hab. MEXICO, near the city and Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Pantaleon, Dueñas, San Gerónimo (*Champion*).

Nine examples.

8. **Amnestus ståli,** n. sp.

Head and pronotum castaneous, scutellum black, corium, legs, and antennæ ochraceous, apical area of the corium black. Head coarsely punctate, the frontal and lateral spines equally long; pronotum with a distinct transverse impression considerably before the middle, anterior lobe with the anterior and lateral margins thickly and coarsely punctate, and with discal punctures at centre and lateral areas, posterior lobe and scutellum thickly and coarsely punctate; corium more finely punctate, the posterior disk impunctate.

Long. 3 millim.

Hab. GUATEMALA, Quiché Mts. 7000 to 9000 feet (*Champion*).

Allied to the preceding species, but structurally distinct by having the pronotum transversely constricted nearer the posterior margin. We have received two examples.

9. **Amnestus pusillus.**

Amnestus pusillus, Uhler, Bull. U.S. Geol. & Geogr. Surv. ii. p. 12 [1]; ibid. iii. p. 371, 2 [2], Sign. Rev. Cydn. p. 230, 6 [3].

Hab. NORTH AMERICA, Eastern United States south of Cape Cod [1], Texas [1 3].—MEXICO, Presidio de Mazatlan in Sinaloa (*Forrer*), Tierra Colorada and Chilpancingo in Guerrero, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, San Gerónimo (*Champion*).—CUBA [1 3].

I feel little doubt in identifying a series of specimens collected in the above localities as belonging to the species described by Prof. Uhler.

CHLÆNOCORIS (p. 309).

4. **Chlænocoris arctatus,** n. sp.

Allied to *C. compressus*, Dist., but smaller, much narrower, and more compressed; antennæ pitchy-brown, the basal joint palest.

Long. 3 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

The above differential characters, alone and sufficiently, separate this species from *C. compressus*, to which in colour and all other aspects it is allied. We possess a single specimen.

SPHYROCORIS (pp. 20, 314).

Sphyrocoris elongatus (pp. 21, 314).

The locality "Ocaña" quoted on p. 21 is probably in Colombia and not in Mexico as stated. The insect was sent to me by Signoret as from Mexico.

PODISUS (pp. 36, 318).

11 (B). **Podisus atitlanensis** n. sp.

Ochraceous, coarsely and darkly punctate; pronotum with the anterior and the antero-lateral margins and two transverse discal callosities on each side of the anterior area pale ochraceous and levigate; lateral

angles very prominent, robustly acute, produced at right angles and slightly upwardly, castaneous in hue, with their apices pitchy; corium with a small dark spot on posterior portion of disk; membrane greyish-brown, with the apex paler; body beneath and legs ochraceous; apex of the rostrum castaneous; antennæ with the second and fourth joints subequal in length; pronotum with the lateral margins coarsely crenulate; ventral spine short, not passing the posterior coxæ.

Long. 10 millim., lat. pronot. angl. 7 millim.

Hab. GUATEMALA, Volcan de Atitlan 2500 feet (*Champion*).

This species, of which we possess but a single example, is allied to *P. congrex*, Stål, from which it differs in the greater length of the pronotal angles, the callosities on the anterior pronotal area, &c.

DRYPTOCEPHALA (p. 44).

2. **Dryptocephala livida.**

Storthia livida, H.-S. Wanz. Ins. vii. p. 42, f. 718 [1] (excl. syn.) (nec Perty).
Dryptocephala livida, Stål, En. Hem. ii. p. 4. 5 [2].
Dryptocephala lurida, Erichs. in Schomb. Reis. iii. p. 609 [3].
Dryptocephala truncata, Fieb. Rhynch. p. 9. 3 [4].

Hab. PANAMA, Bugaba (*Champion*).—COLOMBIA [1 2]; GUIANA [2 3].

Mr. Champion obtained a single specimen in the State of Panama.

MELANODERMUS (pp. 50, 327).

2. **Melanodermus picipes.**

Melanodermus picipes, Stål, En. Hem. ii. p. 14. 3 [1].

Hab. MEXICO (*Sallé*); GUATEMALA, Senahu (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).—COLOMBIA, Bogota [1].

This species is distinguished from *M. tartareus*, Stål (a Mexican species already enumerated and figured in this work), by the shorter second joint of the antennæ and the more angulated apex of the scutellum; the antennæ have the fifth joint luteous at the base and a little longer than the fourth joint.

M. tartareus does not appear to extend further south than Mexico, and the specimens collected in the State of Panama and recorded at p. 327, under the name of that species, should have been ascribed, as above, to *M. picipes*, Stål.

3. **Melanodermus castaneus,** n. sp.

Closely allied to *M. picipes*, but differing from that species in the following characters:—the body, legs, and antennæ are castaneous, the third and fifth joints of the antennæ are about equal in length, and considerably longer than the fourth joint, and the scutellum is a little longer.

Long. 11 millim.

Hab. NICARAGUA, Chontales (*Janson*).

We have only received a single example of this species.

EUSCHISTUS (pp. 58, 329).

12. **Euschistus integellus,** n. sp.

Dark castaneous, very thickly and coarsely punctate; antennæ, eyes, base of lateral margin of corium, connexivum, body beneath, and legs ochraceous; antennæ with the first and second joints more or less spotted with black, apical halves of the third, fourth, and fifth joints black; legs spotted with black; membrane cupreous; body beneath thickly punctured with black; apex of scutellum and a small spot on posterior disk of corium pale ochraceous. Antennæ with the second and third joints subequal in length, shorter than the fourth and fifth joints, which are also about equally long; pronotal angles prominent and broadly subacute, the pronotal lateral margins entire, excepting a spine at anterior angles; tibiæ profoundly sulcated beneath.

Long. 9 millim., lat. pronot. angl. $5\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This species, of which I have seen six examples, is allied to *E. integer*, Stål, by the character of the non-denticulated and non-crenulated lateral margins of the pronotum.

ATIZIES, gen. nov. (To precede the genus *Berecynthus*, p. 61.)

Allied to *Euschistus*, but differing in the very short and non-sulcated tibiæ, and the incrassated tarsi, of which the second joint is very short, and the third subequal in length to, or slightly longer than, the first; central lobe of the head a little shorter than the lateral lobes; lateral margins of the pronotum anteriorly slightly crenulate but not denticulate; rostrum reaching the posterior coxæ.

1. **Atizies suffultus,** n. sp. (Tab. XXXIX. fig. 20.)

Ochraceous, very thickly and castaneously punctate; antennæ with the first and second joints ochraceous, the remaining joints pale castaneous; connexivum ochraceous, with the margins of the incisures castaneous; membrane pale fuscous, with the apex pale hyaline *; body beneath and legs ochraceous, the tarsi and apices of the tibiæ pale castaneous.

Long. 8 millim., lat. pronot. angl. 5 millim.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

A single example.

CAPIVACCIUS, gen. nov. (To precede the genus *Hymenarcys*, p. 63.)

Body broad, ovate; head long and broad, about as long as the pronotum, the lateral margins concavely sinuate, the central lobe slightly longer than the lateral lobes; antennæ with the first joint short, second joint a little longer than first and not extending much beyond the apex of head, third, fourth, and fifth joints subequal in length; pronotum about twice as broad as long, its lateral angles subprominent; scutellum very broad, extending beyond the middle of abdomen, its apex broadly rounded; membrane extending beyond the apex of the abdomen; tibiæ distinctly sulcated. (Rostrum inaccessible, owing to the typical specimen being carded.)

This genus is most closely allied to *Tibraca*, Stål, from which it differs in the shape of the pronotum, and the non-foveate basal angles of the scutellum.

* In descriptions of Rhynchota, the stated colour of the membrane is very often referable to its apparent hue, or to the reflection of the darker abdomen beneath.

1. **Capivaccius bufo,** n. sp. (Tab. XXXIX. fig. 21.)

Ochraceous; eyes, a triangular fascia on basal half of scutellum and the apex of same, a large irregular discal spot to corium, and membrane (excluding apex) dark castaneous; antennæ castaneous, apex of fourth joint and base of fifth joint ochraceous; body beneath and legs ochraceous (imperfectly seen in carded specimen). The head is thickly and coarsely punctate; the pronotum is coarsely punctate and transversely rugose; the scutellum is punctate and obscurely transversely wrinkled; the corium is thickly punctate.

Long. 8 millim.

Hab. PANAMA, Caldera (*Champion*).

A single example.

CRATO, gen. nov. (To follow the genus *Capivaccius*.)

Head very large, but shorter than the pronotum, central lobe reaching the apex of the head, the lateral margins strongly sinuated, the apex convexly rounded; eyes prominent; antennæ with the basal joint short and not nearly reaching the apex of the head, second and third joints subequal in length, shorter than the fourth and fifth joints, which are also about equally long and moderately incrassated. Pronotum depressed from near base, the lateral angles moderately prominent and rounded, the lateral margins slightly sinuate, anterior margin moderately concave, anterior area with two transverse slightly raised callosities. Scutellum about as long as the head and pronotum together, wide at base, narrowed to apex, which is obtusely rounded. Membrane passing the apex of the abdomen. (Rostrum inaccessible, owing to the typical specimen being carded.)

1. **Crato urbicus,** n. sp. (Tab. XXXIX. fig. 22.)

Ochraceous; eyes, margins of central lobe to head, two central lines on anterior area, a spot at each anterior angle and the basal area of pronotum, small basal spots, longitudinal punctures, and apex to scutellum, and spots to connexivum fuscous; antennæ ochraceous, apices of the third, fourth, and fifth joints castaneous; membrane pale hyaline, the venation pale fuscous. The body above is thickly and very coarsely punctate, the base of the pronotum being rugulose.

Long. 6 millim., lat. pronot. angl. 4 millim.

Hab. GUATEMALA, near the city (*Champion*).

A single example.

PERIBALUS (p. 65).

2. **Peribalus politulus,** n. sp.

Dark castaneous, very thickly and coarsely punctate; antennæ, three small basal and two central spots and the apical margin to scutellum, a small spot on disk of corium, connexivum, body beneath, and legs ochraceous; connexivum spotted with castaneous; membrane pale fuscous, castaneous at base; antennæ with the apex of the fourth joint and the apical half of the fifth joint dark castaneous.

Long. $6\frac{1}{2}$ millim.

Hab. GUATEMALA, El Jicaro in Vera Paz (*Champion*); PANAMA, Bugaba (*Champion*).

Mr. Champion sent us a specimen of this species from each of the above localities.

EDESSA (pp. 86, 342).

12 (c). **Edessa obnixa,** n. sp.

Olivaceous; body beneath, antennæ, and legs ochraceous; body beneath variegated with olivaceous; pronotum with the lateral margins very narrowly ochraceous, the apices of the lateral angles black; membrane cupreous; pronotum coarsely but somewhat sparingly punctate; scutellum and corium thickly punctate;

connexivum spotted with ochraceous; second and third joints of the antennæ subequal in length; pronotal angles slightly recurved.

Long. 13 millim., lat. pronot. angl. 9 millim.

Hab. MEXICO, San Lorenzo near Cordova (*M. Trujillo*); GUATEMALA, Las Mercedes (*Champion*).

We had formerly received a mutilated specimen of this species taken by Mr. Champion in Guatemala; a second example now received from Mexico enables me to describe it.

Edessa montezuma (p. 91).

The locality "Ocaña" quoted by me is probably in Colombia and not in Mexico as stated. The insect was sent to me by Signoret as from Mexico.

39 (B). **Edessa fulvipes,** var. **costalis.**

Aceratodes fulvipes, Dall. List Hem. i. p. 335. 6 [1].

Edessa fulvipes, var. *costalis,* Stål, En. Hem. ii. p. 58 [2].

Edessa fulvipes, Stål, En. Hem. ii. p. 58, 60 [3]; Berg, Hem. Argent. p. 62. 77 [4].

Aceratodes costalis, Stål, Eug. Resa, Ins. p. 231. 29 [5].

Hab. PANAMA (*coll. Godm. & Salv.*).—COLOMBIA [1 2]; VENEZUELA [1]; GUIANA [1]; BOLIVIA [2]; BRAZIL, Rio Janeiro [5]; ARGENTINE REPUBLIC [4].

I have followed Stål and Berg in treating the form *costalis*, Stål, as a var. of *fulvipes*, Dall., though I am doubtful as to their specific identity.

ACANTHOSOMA (p. 100).

2. **Acanthosoma flammatum,** n. sp.

Reddish-ochraceous, very coarsely and thickly punctate; apex of fourth joint of antennæ beneath, apical two-thirds of fifth joint, lateral margins of central lobe and centre of basal margin to head, and quadrate spots to connexivum black; lateral angles to pronotum, basal half of scutellum, and a central marginal patch to corium castaneous; apex of scutellum, base of lateral margins to corium, and the legs ochraceous; membrane pale fuscous, with the apex paler; apices of the tarsi fuscous.

Long. 8 millim.

Hab. MEXICO, Omilteme in Guerrero (*H. H. Smith*).

A single example.

FLAVIUS (p. 103).

2. **Flavius notatus.**

Meropachys notatus, Walk. Cat. Het. iv. p. 70. 6 [1].

Hab. GUATEMALA, Teleman in Vera Paz and Quezaltenango (*Champion*); PANAMA, Bugaba (*Champion*).—BRAZIL, Pará [1].

CORYNOCORIS (p. 106).

Corynocoris distinctus (p. 106).

To the localities given, add:—MEXICO, Milpas in Durango (*Forrer*), Chilpancingo, Tepetlapa, and Rincon in Guerrero, Cuernavaca, Atoyac (*H. H. Smith*), Jalapa (*F. D. G.*); GUATEMALA, near the city (*Salvin*), San Gerónimo, Tamahu, and Panima in Vera Paz (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui, David, Tolé (*Champion*).

GALEOTTUS, gen. nov. (To precede the genus *Trachelium*, p. 159.)

Head very large, longer than the pronotum; eyes inserted at about one-third from base, from whence to base the head is gradually constricted; antennæ inserted about halfway between eyes and apex, first joint a little longer than either second or third joints, which are subequal in length, fourth joint as long as second and third together. Pronotum with the anterior margin convex, the lateral angles spinous, the basal margin straight and toothed near basal angles of scutellum. Scutellum broad, subtriangular, slightly foveate at each basal angle, the foveæ followed by an obscure nodule on each lateral margin, the apex slender and acute. Corium rudimentary, not extending beyond the centre of the abdomen, which beyond the corium is somewhat gibbous and possesses two pairs of central discal tubercles. Posterior femora spined beneath at apices; posterior tibiæ unarmed at apices. Rostrum almost reaching the posterior coxæ.

It is probable that the species for whose reception I am compelled to propose this genus is in an undeveloped condition; but this only applies to the corium, and the other characters, especially of the head and scutellum, are strikingly distinct from those of any other genus of the American Micrelytraria.

1. **Galeottus formicarius,** n. sp. (Tab. XXXIX. fig. 23.)

Very pale castaneous; pronotum ochraceous; abdominal tubercles black; structural characters as in the preceding generic diagnosis.

Long. 10 millim.

Hab. GUATEMALA (*Conradt*); NICARAGUA, Chontales (*Janson*).

A single example from Nicaragua—which is here figured—is alone in such condition as to render description possible. Several specimens sent by Conradt in spirits from Guatemala undoubtedly also belong to the same species. They were all in the same condition of development.

BACTRODOSOMA. (To precede the genus *Protenor*, p. 160.)

Bactrodosoma, Stål, Rio Jan. Hem. i. p. 34 (1860); Öfv. Vet.-Ak. Förh. 1867, p. 543.

This genus is allied to both *Protenor* and *Darmistus*, already included in our fauna, but differs from both in having the pronotum not prominently narrowed anteriorly, but with the lateral margins subparallel.

1. **Bactrodosoma elongatum,** n. sp. (Tab. XXXIX. fig. 27.)

Brownish-ochraceous; fourth joint of the antennæ (excluding base), rostrum (excluding basal joint), tibiæ, and membrane pale fuscous; ocelli castaneous; body beneath ochraceous, with the lateral margins pale fuscous; head, pronotum, scutellum, and clavus thickly punctate; corium with the inner and lateral

areas punctate, the disk impunctate; lateral angles of the pronotum subnodulose; antennæ finely setose, the first, second, and fourth joints subequal in length, the third joint shortest; tibiæ finely setose.
Long. 12 millim.

Hab. PANAMA, Boquete in Chiriqui 3500 feet (*Champion*).

A single example.

CURUPIRA. (To follow the genus *Leptocorisa*, p. 162.)

Curupira, Distant, Compt. Rend. Soc. Ent. Belg. 1888, p. xi.

I proposed this genus for the reception of a species from Rio Janeiro. I am now able to add another species from the State of Panama.

1. **Curupira villosa**, n. sp. (Tab. XXXIX. fig. 24.)

Head, pronotum, and scutellum black, very thickly greyish pilose; eyes pale castaneous; antennæ, apical spine to scutellum, hemelytra, connexivum, and legs ochraceous; head beneath and sternum black; abdomen beneath ochraceous, its base, apex, and sometimes the whole of lateral margins black; abdomen above with the apical area black; apices of the tarsi fuscous. The head, pronotum, and sternum are coarsely punctate; the apical spine to the scutellum is long, slender, and slightly directed backwardly; the second and third joints of the antennæ are subequal in length and each shorter than the fourth.
Long. 8–9 millim.

Hab. PANAMA, Caldera in Chiriqui (*Champion*).

Mr. Champion procured us a series of examples of this species.

STENOCEPHALUS. (To follow the genus *Curupira*).

Stenocephalus, Latreille, Fam. Nat. p. 421 (1825); Dall. List Hem. ii. p. 481 (1852).

A very widely distributed genus, most numerously represented in the Old World.

1. **Stenocephalus mexicanus.**

Stenocephalus mexicanus, Ashm. Canad. Ent. xviii. p. 19 (1886)[1].

Hab. MEXICO, Tehuantepec (*Sumichrast*[1]).

NEIDES. (To precede the genus *Jalysus*, p. 162.)

Neides (part.), Latreille, Hist. Gen. Ins. 3, p. 120 (1807); Amy. & Serv. Hist. des Hem. p. 233 (1843).

Neides, Fieber, Eur. Hem. pp. 54 & 209 (1861); Stål, En. Hem. iv. p. 127 (1874).

This genus, widely distributed throughout the Palæarctic and Nearctic regions, and also recorded from New Zealand, is now included in the Neotropical fauna on account of the presence of the following species.

1. **Neides caducus**, n. sp.

Pale ochraceous; margins and a central line to pronotum, a central fascia to scutellum, and margins of clavus stramineous; apical joint of the antennæ (excluding base and apex) and the tarsi fuscous; head beneath with a pale stramineous longitudinal fascia on each side. The pronotum is very coarsely and thickly

punctate; the head is twice as long as broad and the pronotum twice as long as its basal breadth, with its lateral angles distinctly nodulose.

Long. 8–10 millim.

Hab. MEXICO, Chilpancingo in Guerrero (*H. H. Smith*); PANAMA, Volcan de Chiriqui 8000 feet (*Champion*).

Mr. Smith took six specimens of this species in Mexico, and Mr. Champion found another example on the Volcan de Chiriqui. I have carefully compared *N. caducus* with the description of *N. gracilipes*, Stål, found throughout the United States, from which it appears to be quite distinct.

XENOGENUS. (To follow the genus *Harmostes*, p. 168.)

Xenogenus, Berg, Hem. Argent., Add. & Emend. p. 45 (1884).

This genus can at once be distinguished from *Harmostes* by the non-produced and non-spined antenniferous tubercles, the elevated ocelli, elongate body, &c.

Xenogenus was founded for the reception of a species received from the Argentine Republic and Uruguay.

1. **Xenogenus extensum**, n. sp. (Tab. XXXIX. fig. 26.)

Head, antennæ, pronotum, scutellum, body beneath, and legs pale ochraceous; corium and membrane pale hyaline, the corium with the margins and veins ochraceous, spotted with carmine-red, and with a distinct fuscous spot near inner angle and at apex; membrane pale hyaline; femora spotted with brownish, the spines of the posterior tibiæ black; tibiæ spotted with black, the apices of the tarsi also black; antennæ with the basal joint margined with black externally and about reaching the apex of the head, second and third joints subequal in length and only very slightly longer than the fourth joint; lateral margins of the pronotum entire, neither crenulated nor serrated; pronotum coarsely and thickly punctate, with a central pale levigate line; head and scutellum finely and sparingly punctate; body beneath finely punctate and spotted with carmine-red.

Long. 8 millim.

Hab. MEXICO, Orizaba (*F. D. G.*).

Only a single example of this species was obtained; it has many characters in common with *X. picturatum*, Berg, found in the Argentine fauna.

RENODÆUS, gen. nov. (To follow the genus *Phœax*, p. 413.)

Head large, broad, and subtriangular, posterior margin equal in width to anterior margin of pronotum, the eyes non-prominent, the apex somewhat acute, the central lobe prominent; antennæ inserted about midway between the eyes and apex, first joint shorter than the head, second joint longest, third short and strongly incrassated towards apex, fourth incrassated and longer than third; ocelli absent. Pronotum somewhat long, the posterior margin convex, gibbous near centre and from thence angularly depressed to base; lateral margins sinuate, the lateral angles subprominent, the anterior angles rounded. Scutellum very small, its apex subnodulose. Corium with the lateral margin concavely sinuate near base and widened towards apex; membrane small. Rostrum about reaching the intermediate coxæ. Femora moderately incrassated; posterior tibiæ long.

This is another of those aberrant genera of Pyrrhocoridæ already represented by *Arhaphe*, *Japetus*, and *Phœax*.

1. **Renodæus ficarius,** n. sp. (Tab. XXXIX. fig. 25.)

Head and pronotum black or very dark castaneous; corium, body beneath, and legs castaneous; corium with pearly-grey pubescence at base, centre, and near apex; membrane fuscous, with the apex paler; apices of the femora ochraceous; tarsi pale ochraceous, with their apices black.

Long. 3½ millim.

Hab. GUATEMALA, San Gerónimo and Cerro Zunil (*Champion*).

One specimen from each of the above localities constitutes our knowledge of this interesting species.

LYGUS (pp. 272, 432).

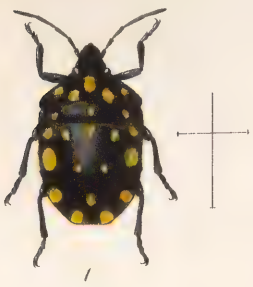
12 (A). **Lygus fortinensis,** n. sp.

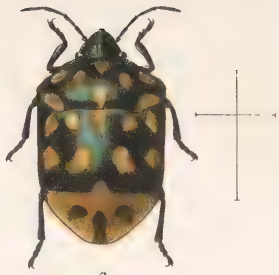
Head ochraceous, its apex, eyes, and antennæ black; pronotum and scutellum black, the last with its basal angles ochraceous; corium black, thickly ochraceously pilose, and with its lateral margins ochraceous; cuneus pale fuscous, with its basal margin pale ochraceous; body beneath castaneous; legs pale ochraceous, posterior femora (excluding base) castaneous; tibiæ spotted with black; apices of the tarsi black; membrane pale fuscous, its lateral margins paler and the basal cells black margined with ochraceous.

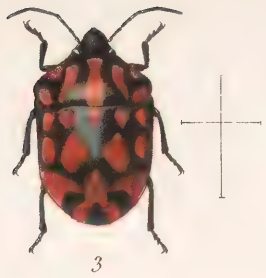
Long. 3½ millim.

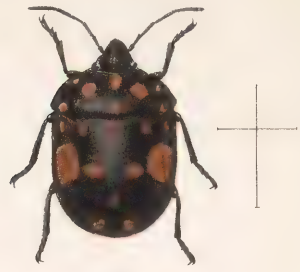
Hab. MEXICO, Fortin in Vera Cruz (*H. H. Smith*).

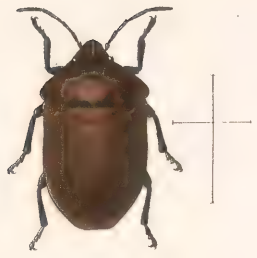
A single example.

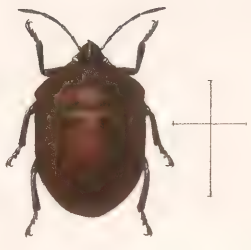

1

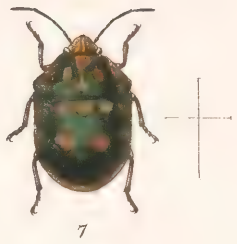

2

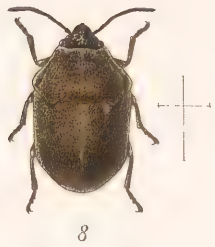

3


4


5


6


7


8

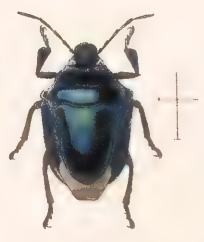
9

10

11

12

13


14

15

16

17

18

19

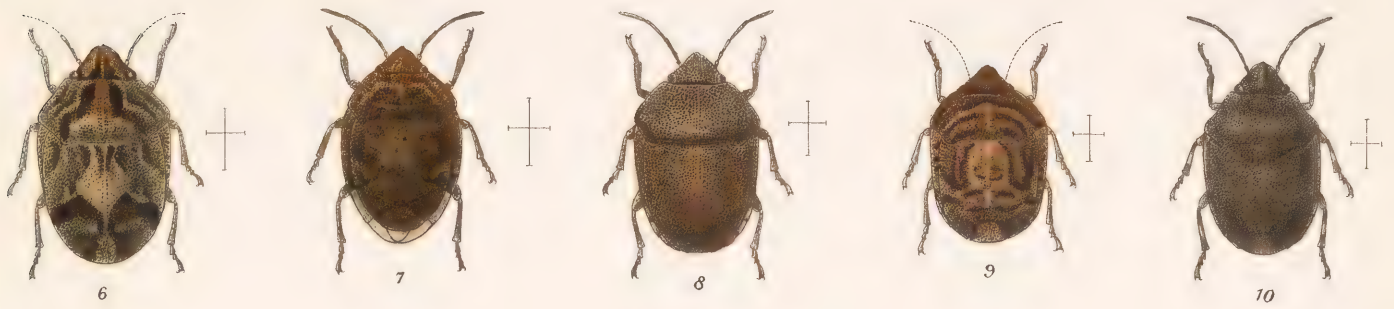
20

21

22

1 PACHYCORIS TORRIDUS. *Var.*
2 „ „ „
3 „ „ „
4 „ „ „
5 „ „ „
6 „ „ „
7 „ „ „
8 ORSILOCHUS COMPLICATUS.
a 9 ORSILOCHUS VARIABILIS
d *Var* PUNCTATISSIMUS.
10 AUGOCORIS EHRENBERGII.
e 11 „ „
f 12 SYMPHYLUS DEPLANATUS *Var.*
h 13 „ „
i 14 STIRETRUS ANCHORAGO *Var.*
15 STIRETRUS ANCHORAGO *Var.*
16 OPLOMUS DICHROUS. *Var.*
17 „ PROTEUS.
18 PERILLUS CONFLUENS.
19 APATETICUS HALYS.
20 PODISUS CONGREX.
21 EUTHYRHYNCHUS FLORIDANUS.
22 PODISUS SAGITTA.

KODAK Color Control Patches
© The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Inches 1 2 3 4 5 6 7 8
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19



1 ORSILOCHUS STICTICUS.
2 DYSTUS PUBERULUS.
3 HOMÆMUS PROTEUS
4 „ „ *Var*
5 SPHYROCORIS PUNCTELLUS.
6 „ ELONGATUS.
7 SYMPHYLUS PLAGIATUS.
8 „ MODESTUS.
9 SYMPHYLUS SIGNORETI.
10 ZOPHOËSSA SOCIA.
11 „ MOESTA.
12 CYRTOMENUS EXCAVATUS.
13 „ TETER.
14 „ GROSSUS.
15 PANGÆUS MARGO
16 THYREOCORIS GUTTIGER.
17 „ QUADRISIGNATUS.
18 PANGÆUS PICEATUS
19 „ DISCREPANS.
20 CORYZORHAPHIS CRUCIATA
21 PODISUS CLOELIA.
22 „ ACUTISSIMUS.
23 ORSILOCHUS SCURRILIS.
24 MICROPORUS TESTUDINATUS.
25 THYREOCORIS CHAMPIONI.

W Purkiss lith. Hanhart imp

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

W.Purkiss Hth.

1 TETYRA FARCTA.
2 SYMPHYLUS GIBBOSUS.
3 ÆTHUS NITIDULUS.
4 THYREOCORIS INCERTUS.
5 " RASTRATUS.
6 SYLLOBUS EMARGINATUS.
7 PANGÆUS IMPUNCTICOLLIS.
8 " FORTIS.
9 STIRETRUS CRUCIFER.
10 " CERULEUS.
11 " FLAVIPES.
12 " RUFICEPS.
13 OPLOMUS PULCHER.
14 " " *var.*
15 " PROTEUS, *var.*
16 " MUTABILIS.
17 OPLOMUS PROTEUS, *var.*
18 " VENTRALIS.
19 " MUTABILIS, *var.*
20 " RUTILUS, *var.*
21 HETEROSCELIS LEPIDA.
22 PERILLUS VIRGATUS.
23 PODISUS TINCTUS.
24 " AFFINIS.

Hanhart imp. 203

Biol. Centr. Am. Rhynchota. Vol. 2.

1 PODISUS IOLE.
2 „ THETIS.
3 TYNACANTHA PULCHRICORNIS.
4 PODISUS MODESTUS.
5 „ MEXICANUS.
6 PERILLUS CIRCUMCINCTUS.
7 LOBONOTUS ANTHRACINUS.
8 MICROPORUS MEXICANUS.
9 RHYTIDOPORUS INDENTATUS.
10 STENOCORIS LONGULUS.
11 OPLOMUS DISTINCTUS.
12 MUTYCA GRANDIS.
13 CYRTASPIS ATRATULA.
14 PODISUS NIGRIVENTRIS.
15 „ INSIGNIS.
16 OPLOMUS TRIPUSTULATUS, *var.* SALAMANDRA.
17 OPLOMUS MUNDUS.
18 „ BIARCUATUS.
19 „ NIGRIPENNIS.
20 PODISUS FUSCESCENS.
21 „ INVARIA.
22 DISCOCEPHALA HUMILIS.
23 DRYPTOCEPHALA OBTUSICEPS.
24 PODISUS MARGINIVENTRIS.

W.Purkiss lith. Hanhart imp. 214

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

1 DISCOCEPHALA NOTULATA.
2 „ MARGINELLA.
3 LINOCORIS TRIPTERUS
4 „ PICEUS, *var.*
5 MACROPYGIUM RETICULARE.
6 MELANODERMUS TARTAREUS.
7 BROCHYMENA HÆDULA.
8 COSMOPEPLA CONSPICILLARIS
9 MORMIDEA COLLARIS.
10 „ ANGUSTATA.
11 „ PICTIVENTRIS
12 „ NOTULATA
13 GALEDANTA MYOPS.
14 EUSCHISTUS VERRUCIFER.
15 „ BIFORMIS.
16 „ STRENUUS.
17 SIBARIA ARMATA.
18 PROXYS VICTOR.
19 THYANTA CASTA.
20 EUSCHISTUS TRISTIGMUS, *var.*
21 „ „ *var.*
22 CHLOROCORIS ATRISPINUS.
23 „ RUFISPINUS.
24 „ ABERRANS.
25 LOXA VARIEGATA.

W.Purkiss lith Hanhart imp

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters Inches

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

1 DISCOCEPHALA CLYPEATA.
2 MACROPYGIUM PARVUM.
3 DINOCORIS OBSCURUS.
4 EMPICORIS RAMOSUS.
5 BROCHYMENA TENEBROSA.
6 NORMIDEA TETRA.
7 " YPSILON,
var: INERMIS.

8, 9 EUSCHISTUS RUGIFER.
10 " SPURCULUS.
11 " COMPTUS.
12 " LINEATUS.
13 EURYSTETHUS SIGNORETI.
14 BERECYNTHUS DELIRATOR, var.
15 TRICHOPEPLA SEMIVITTATA, var?
16 PADÆUS TRIVITTATUS.
17 HYMENARCYS RETICULATA.

18 LIODERMA VHLERI.
19 PERIBALUS LIMBOLARIUS.
20 CHLOROCORIS RUBESCENS.
21 " SUBRUGOSUS.
22 LOXA AFFINIS.
23 " CHAMPIONI.
24 PHARYPIA NITIDIVENTRIS.
25 " FASCIATA.

W. Hanhart lith.

Hanhart imp. 240

Blatt. Exotic. Fam.

Rhynchota. Tab. 6.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

W.Purkiss lith.

1 PODISUS RUBRO-MACULATUS.
2 PELIDNOCORIS STALII.
3 MORMIDEA LÆVIGATA.
4 THYANTA TÆNIOLA.
5 EUSCHISTUS INTEGER.
6 PIEZODORUS GUILDINGI.
7 BANASA VARIANS.
8 PHINEUS FUSCO-PUNCTATUS.
9 PHALÆCUS DECORATUS.
10 BANASA IMBUTA.
11 ARCOCERA MELANOPYGA.
12 " APTA.
13 " SPLENDENS.
14 " var.
15 " RUFO-NOTATA.
16 CHLOROCORIS IRRORATUS.
17 ARCOCERA FATIBULATA.
18 ARCOCERA FROTEA.
19 " " var.
20 MURGANTIA MUNDA.
21 " HISTRIONICA.
22 NEZARA STICTICA.
23 " MARGINATA.
24 TAURocerus ACHILLES.
25 " EDESSOIDES.

Hanhart imp 242

Biol. Centr. Am. Rhynchota Vol. 1.

1 TAUROCERUS ABRUPTA.
2 EDESSA MEXICANA, *var.*
3 BANASA STÅLII.
4 BRACHYSTETHUS VICINUS.
5 BOTHROCORIS FUSCO-PUNCTATUS.
6 BRACHYSTETHUS RUBRO-MACULATUS, *var.*
7 PANTOCHLORA VIVIDA.
8 PEROMATUS NOTATUS.
9 EDESSA LATICORNIS.
10 „ COSTALIS.
11 „ TAURINA.
12 „ VENTRALIS.
13 „ JUGATA.
14 „ OLIVACEA.
15 „ HÆDINA.
16 „ NIGRICORNIS.
17 „ RETICULATA.
18 EDESSA NIGROSPINA.
19 „ BONASIA.
20 „ JUNIX.
21 „ IRRORATA.
22 „ PATRICIA.
23 „ COLLARIS.
24 „ CONSPERSA.
25 „ WESTRINGII.

W. Purkiss lith. Hanhart imp.
244.

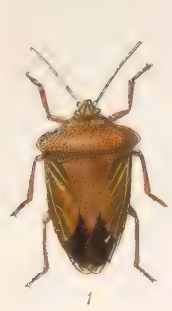
KODAK Color Control Patches
© The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters
Inches

1. EDESSA PRÆCELLENS.
2. „ PHŒNICOPUS.
3. „ FUSCIDORSATA.
4. „ SALVINI.
5. „ LINDSTRÖMI.
6. „ MONTEZUMA.
7. „ JURGIOSA.
8. „ PUDICA.
9. EDESSA RIXOSA. *Var Cortesi.*
10. „ TRIFURCA.
11. „ PUNCTICORNIS.
12. „ LEPIDA.
13. „ VINULA.
14. „ STÄLII.
15. „ PUNCTIVENTRIS.
16. „ RIXOSA.
17. „ AFFINIS
18. EDESSA PICTICORNIS
19. „ GODMANI.
20. „ PUDIBUNDA.
21. „ CHAMPIONI.
22. „ CORNUTA.
23. „ CORDIFERA.
24. „ SIGILLATA
25. „ PETERSII

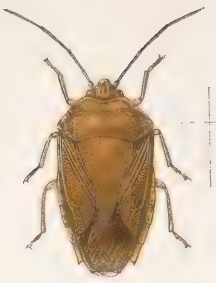
W. Purkiss lith.

Hanhart imp.

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters Inches


1

2


3

4

5

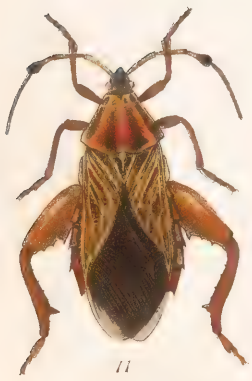
6

7

8

9

10


11

12

13

14

15

16

17

18

19

1 PEROMATUS TRUNCATUS.
2 EDESSA ABDOMINALIS.
3 „ UNICOLOR.
4 OLBIA CAPRINA.
5 ACANTHOSOMA LATERALIS.
6 DINIDOR RUFO-CINCTUS.
7 ♂,8 ♀ FLAVIUS LINEATICORNIS.
9 ♂,10 ♀ HIRILCUS ALTERNATUS.
11 PACHYLIS PHARAONIS, *var*
12,13 PACHYLIS HECTOR.
14,15 ACANTHOCEPHALA ALATA.
16 ♂,17 ♀ THASUS ACUTANGULUS.
18 ♀,19 ♂ THASUS GIGAS.

W Purkiss lith.

1. 2♂ 3♀ LYCAMBES VARICOLOR.
4 MOZENA SCRUPULOSA
5 " NESTOR
6 CAPANEUS MULTISPINUS.
7 " ACHILLES
8 " AURICULATUS

9. CAPANEUS RUBRONOTATUS.
10. NEMATOPUS LEPIDUS.
11♂ 12♀ CAPANEUS ODIOSUS.
13♂ 14♀ ARCHIMERUS SCUTELLARIS.
15. MACHTIMA MEXICANA.
16♂ 17♀ ACANTHOCEPHALA BICOLORIPES.
18♀ " GRANULOSA.

19♂ ACANTHOCEPHALA DECLIVIS.
20♂ " SUBALATA.
21♀ " DECLIVIS.
22♂ 23♀ " " *var Panamensis*
24♂. " DECLIVIS.

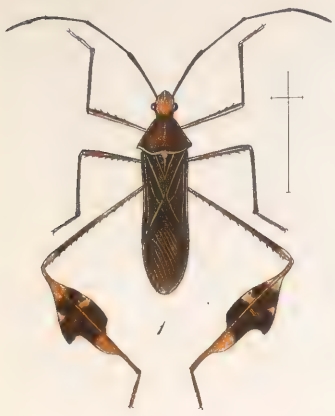
W. Purkiss lith. Hanhart imp

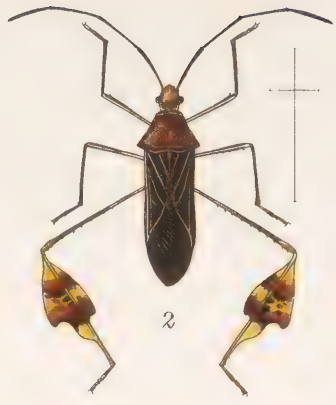
266.

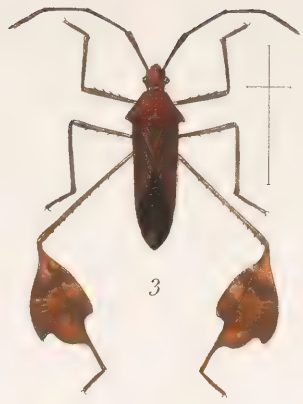
1. MOZENA LURIDA.
2. „ AFFINIS.
3. CAPANEUS SPURCUS
4♂,5♀. ARCHIMERUS INDECORUS.
6. CAPANEUS TETRICUS.
7♂,8♀. ARCHIMERUS THORACICUS.
9♂, ACANTHOCEPHALA GRANULOSA.
10♂, ACANTHOCEPHALA LUCTUOSA.
11. ACIDOMERIA RUSTICA.
12. CAPANEUS VATES.
13. STENOSCELIDEA ÆNESCENS.
14. NEMATOPUS NIGRO-ANNULATUS
15. MARMURIUS MOPSUS.
16. LEPTOGLOSSUS ZONATUS.
17. LEPTOGLOSSUS LINEOSUS.
18. „ SUBAURATUS.
19. ANASA NIGRIPES.
20. „ IMPICTIPES.
21. „ COSTALIS.
22. SEPHINA LIMBATA.
23. „ VINULA

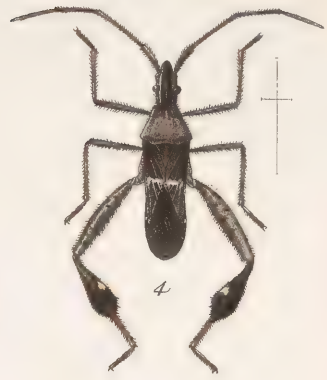
W.Purkiss lith. Hanhart imp.

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8


1


2


3


4

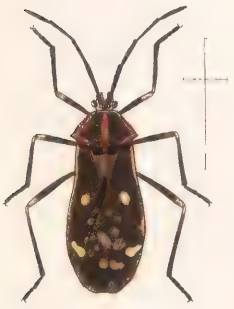
5

6

7

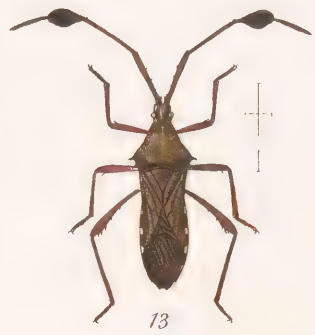
8

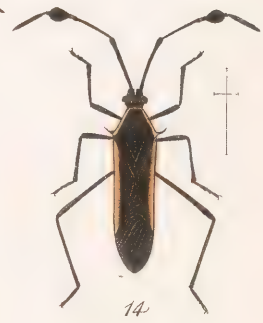
9

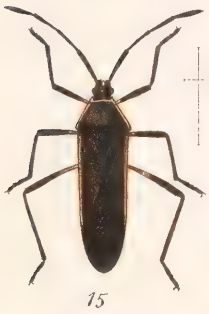

10

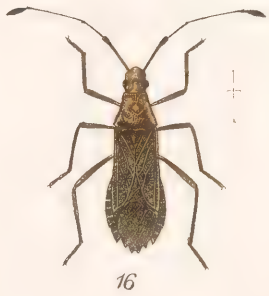
11

12


13


14


15


16

17

18

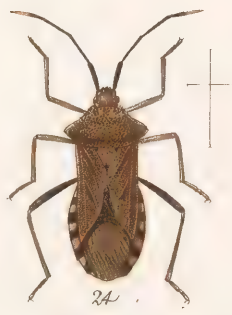
19

20

21

22

23


24

25

1 & 2♀ ANISOSCELIS GRADADIA.
3. " AFFINIS.
4. NARNIA FEMORATA.
5. LEPTOSCELIS TRICOLOR
6. SPARTOCERA GRANULATA.
7. SEPHINA BICORNIS.
8. " DORSALIS.
9. " ROGERSI.
10. SEPHINA GENICULATA.
11. CHARIESTERUS ALBIVENTRIS.
12. " MŒSTUS.
13. " ALTERNATUS.
14. PLAPIGUS CIRCUMCINCTUS.
15. STALUPTUS MARGINALIS
16. MADURA PERFIDA.
17. CHELINIDEA TABULATA.
18. MARGUS INORNATUS.
19. CATORHINTHA SELECTOR.
20. ANASA CAPANEODES.
21. CATORHINTHA MENDICA.
22. CIMOLUS VITTICEPS.
23. ANASA UHLERI.
24. " NOTATIPENNIS.
25. " LITA.

W. Purkiss lith. Hanhart imp 273

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

1

2

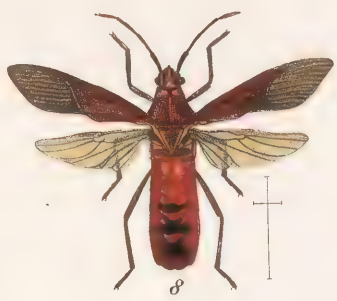
3

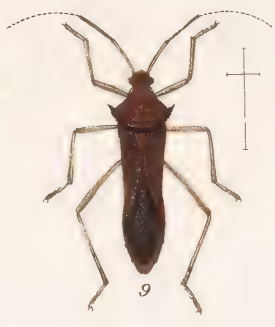
4

5

6

7


8


9

10

11

12

13

14

15

16

17

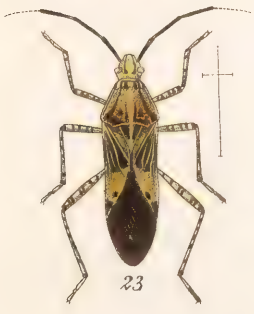
18

19

20

21

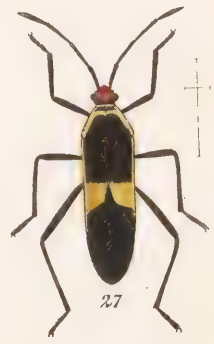
22


23

24

25

26

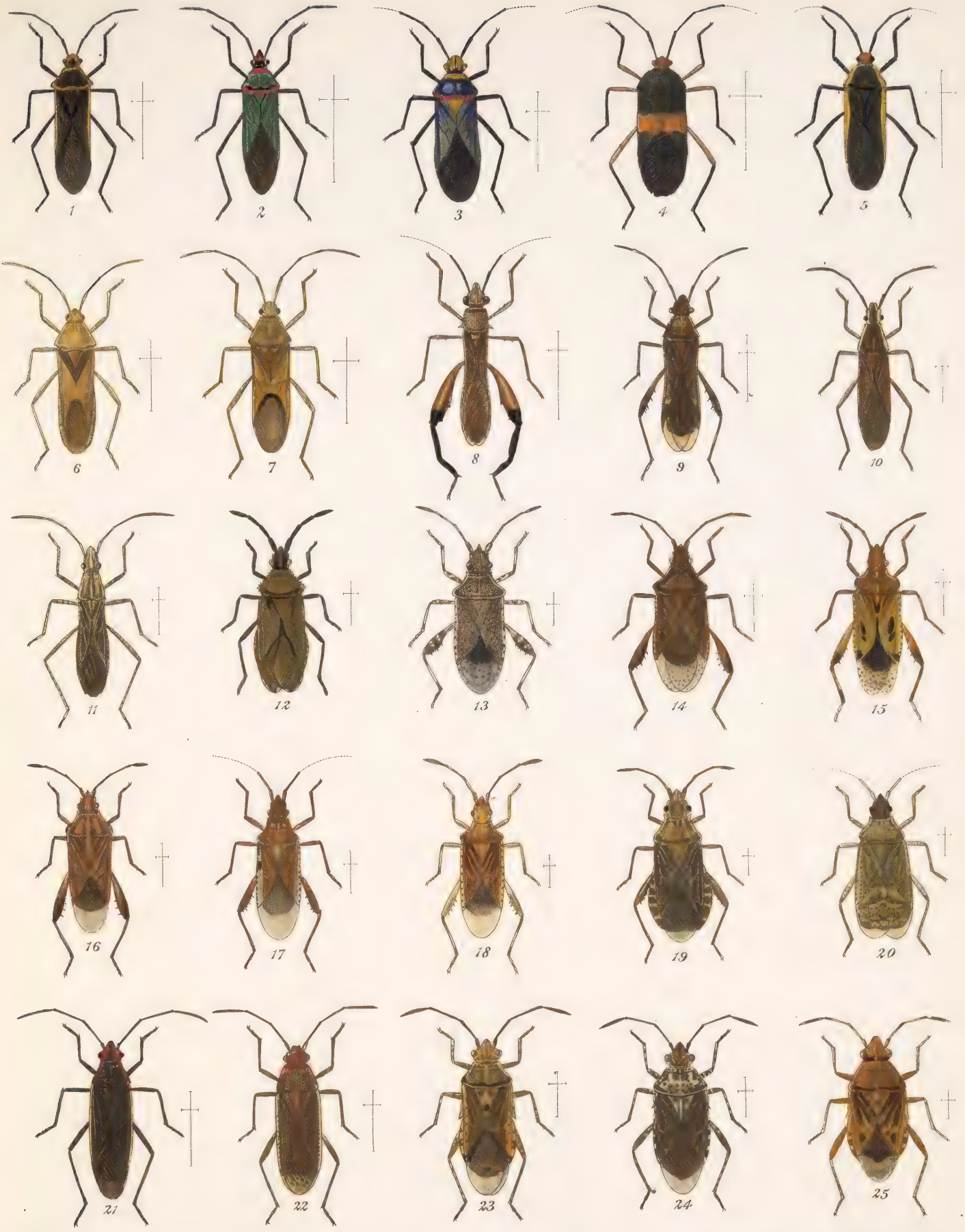

27

1. FICANA APICALIS.
2. ANASA LITIGIOSA.
3. „ MADIDA.
4. „ MACULIPES.
5. „ CONSPERSA.
6. „ TAURIFORMIS.
7. „ FLAVO-VITTATA.
8. NAMACUS ANNULICORNIS.
9. ANASA MUCRONATA.
10. MARGUS INORNATUS.
11. ANASA DENTICULATA.
12. „ TENEBRICOSA.
13. ZICCA TÆNIOLA.
14. COLLATIA EMARGINATA.
15. „ JUBATA.
16. VILGA DALLASI.
17. COLLATIA DIVERGENS.
18. NIROVECUS CLAVIGER.
19. ZICCA COMMACULATA.
20. CEBRENIS ROBUSTA.
21. „ MODESTA.
22. „ CENTRO-LINEATA.
23. HYPSELONOTUS PUNCTIVENTRIS.
24. „ LINEATUS.
25. „ CONCINNUS.
26. „ „ *var.* PROPINQUUS.
27. „ ATRATUS.

W. Purkiss lith.

Hanhart imp.

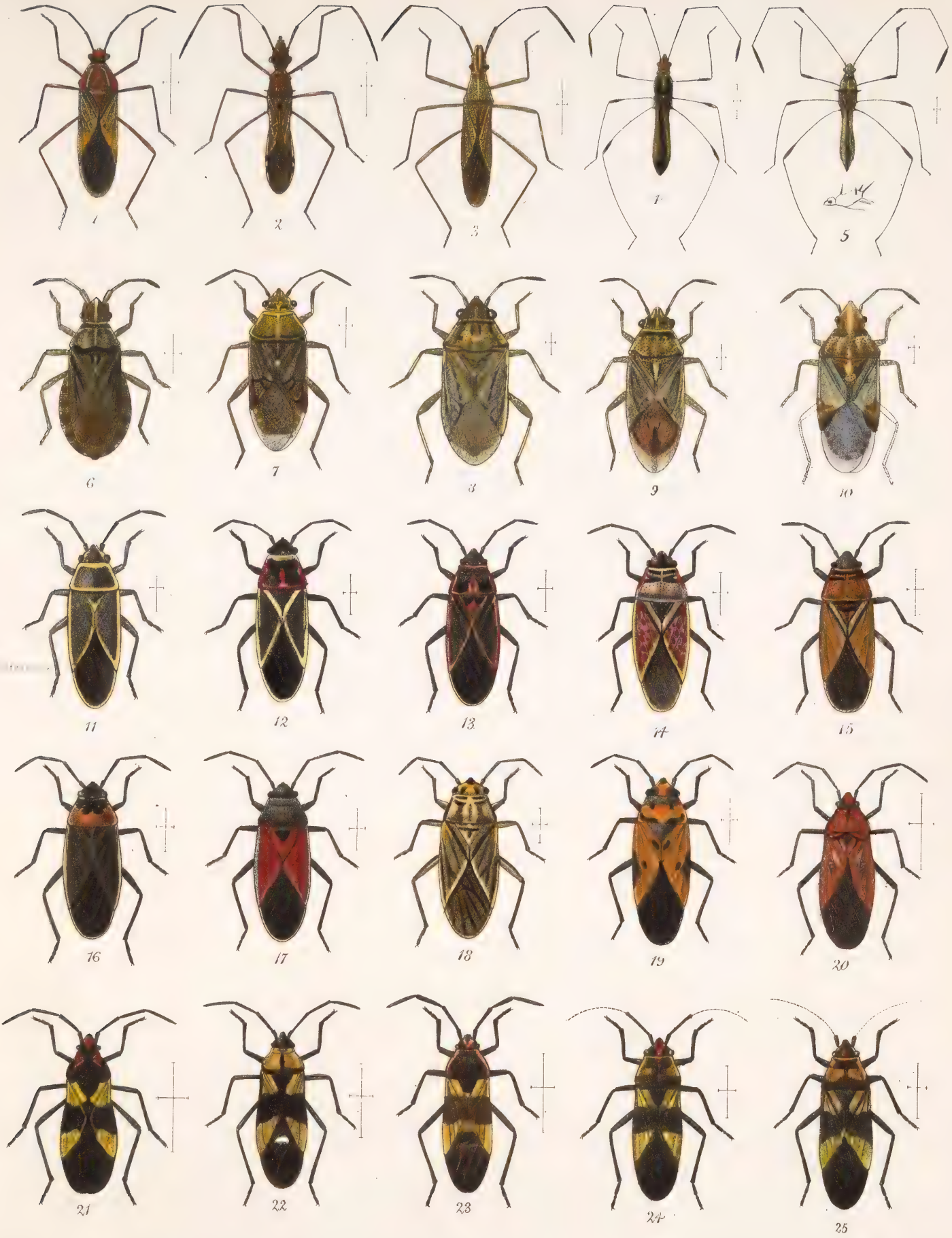
KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8



1 SPHICTYRTUS PRETIOSUS.
2 „ LONGIROSTRIS.
3 „ INTERMEDIUS, *var.*
4 PARYPHES FLAVO-CINCTUS.
5 „ IMPERIALIS.
6 SAVIUS DELECTUS.
7 „ JURGIOSUS.
8 HYALYMENUS PULCHER.
9 ALYDUS FEMORALIS.
10 DARMISTUS SUBVITTATUS.
11 CYDAMUS BOREALIS.
12 DASYCORIS NIGRICORNIS.
13 HARMOSTES SERRATUS.
14 „ NEBULOSUS.
15 „ FORMOSUS.
16 „ SUBRUFUS.
17 „ BICOLOR.
18 HARMOSTES FRATERCULUS.
19 „ PROPINQUUS.
20 AUFEIUS IMPRESSICOLLIS.
21 JADERA LATERALIS.
22 „ ÆOLA.
23 CORIZUS VENTRALIS.
24 „ PICTIPES.
25 „ LUTEOLUS.

W.Purkiss lith. Hanhart imp. 282

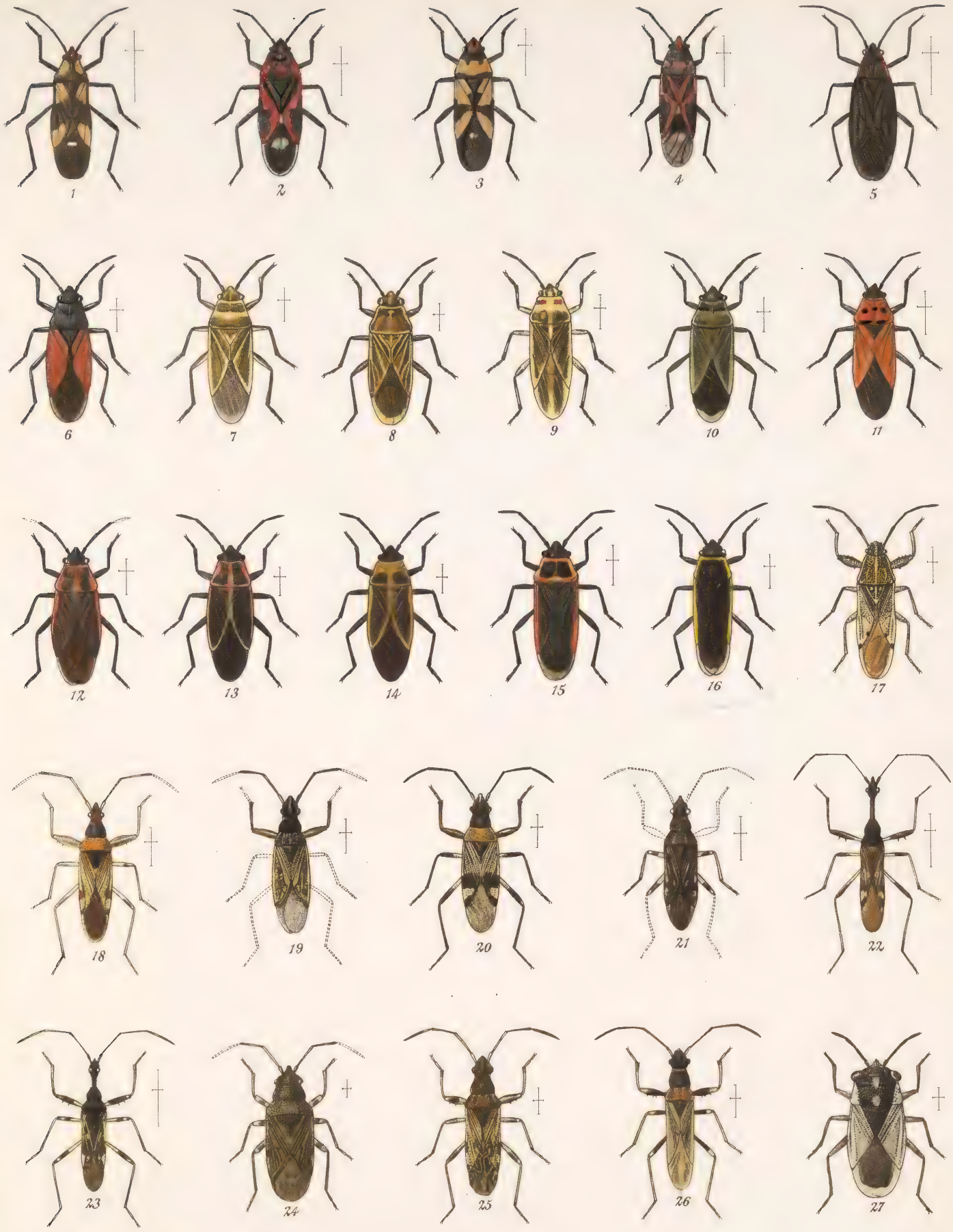
KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8



1 HYPSELONOTUS INTERRUPTUS, *var* BILINEATUS
2 TRACHELIUM ALBO-APICATUS.
3 PROTENOR TROPICALIS.
4 JALYSUS MOLLITUS.
5 PARAJALYSUS SPINOSUS.
6 SCOLOPOCERUS UHLERI.
7 CORIZUS HYALINUS.
8. CORIZUS PUNCTATUS
9. 10. „ LATERALIS.
11. LYGÆUS PALLIDO-CINCTUS.
12. „ UHLERI.
13. „ CIRCUMLITUS.
14. 15. „ BICRUCIS.
16. „ THORACICUS.
17. „ BICOLOR.
18. LYGÆUS VENOSUS.
19. „ TRUX.
20. ONCOPELTUS VARICOLOR, *var* STÅLII.
21. „ VARICOLOR
22. „ GUTTAS
23. „ FASCIATUS
24. „ CINGULIFER
25. „ „

W. Purkiss lith. Hanhart imp.

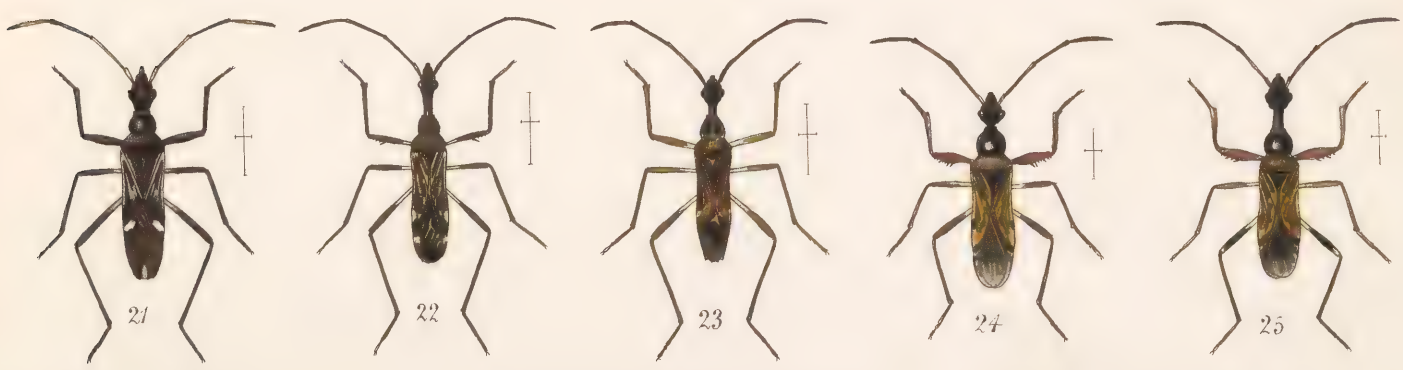
KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8



1 ONCOPELTUS SEXMACULATUS.
2 LYGÆUS KALMII.
3 „ RUFICEPS.
4 „ TRUCULENTUS.
5 JADERA HÆMATOLOMA.
6 LYGÆUS PYRRHOPTERUS.
7 „ PALLESCENS.
8 „ INTERSTINCTUS.
9 „ CRUENTATUS.
10 LYGÆUS PALLESCENS, *var.*
11 „ NIGRIGUTTULUS.
12 „ RUBRIGER
13 „ CIRCUMLINITUS.
14 „ VITTISCUTIS.
15 ACROLEUCUS BREVICOLLIS.
16 „ TULLUS.
17 PACHYGRONTHA ŒDANCALODES.
18 LIGYROCORIS MULTISPINUS.
19 LIGYROCORIS LITIGIOSUS.
20 „ BALTEATUS.
21 „ ABDOMINALIS.
22 MYODOCHA LONGICOLLIS.
23 „ GIRAFFA.
24 PLOCIOMERA OBLONGA.
25 PAMERA BILOBATA.
26 „ LONGULA.
27 GEOCORIS LIVIDIPENNIS.

W. Purkiss lith. Hanhart imp.

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8



1 LYGÆUS LATERALIS.
2 „ GUATEMALANUS.
3 „ CONJUNCTUS.
4 „ CIRCUMPLICATUS.
5 „ DISPAR.
6 „ VERECUNDUS.
7 „ NIGRINERVIS.
8 ACROLEUCUS VICINALIS.
9 LYGÆUS VARIEGATUS.
10 ACROLEUCUS SUBNIGER.
11 LYGÆUS PLAGIATUS.
12 „ CONSANGUINITAS.
13 „ AUREUS.
14 GEOCORIS PUNCTIPES, *Var.*
15.16 „ THORACICUS, *Vars.*
17 GEOCORIS BOREALIS.
18 „ IMPERIALIS.
19 „ FLAVILINEUS.
20 LIGYROCORIS DELITUS.
21 HERÆUS EXIMUS.
22 MYODOCHA UNISPINOSA.
23 „ INERMIBUS.
24.25 PEPHYSENA LEVIS

W Purkiss lith. Hanhart imp.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

W. Hurlbut, lith. Hanhart, imp.

1. ISCHNORHYNCHUS GODMANI.
2. " SALVINI.
3. " CHAMPIONI.
4. NINUS NOTABILIS.
5. NEONINUS ILLUSTRIS.
6. NINYAS STRABO.
7. ISCHNODEMUS PRÆCULTUS.
8. LIGYROCORIS INFUMATUS.
9. LIGYROCORIS OBLITUS.
10. HERÆUS PERCULTUS.
11. " GUTTATUS var.
12. PAMERA PARVULA.
13. " VICINALIS.
14. " DALASI.
15. " VIVIDA.
16. " GLOBICEPS.
17. CHOLULA VARIEGATA.
18. " BICOLOR.
19. NEOCATIARUS FIRMUS.
20. " VEGETUS.
21, 22. " VIGENS.
23. RHYPAROCHROMUS PLENUS.
24. PLOCIOMERA CÆCA.
25. " FORMOSA.

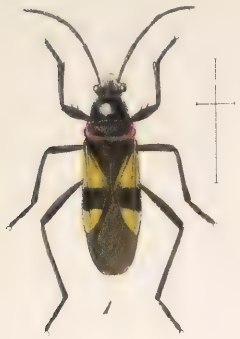
Rhynchota. Tab. 19. Bard Berlin. Phot.

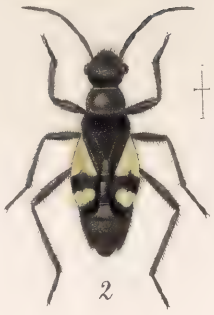
1. NEOCATTARUS PARVUS.
2. „ GRACILIS.
3. TRAPEZONOTUS CALIGINOSUS.
4. TRAPEZUS TRIMACULATUS.
5. „ FASCIATUS.
6. GONATAS TYPICUS.
7. EREMOCORIS TROPICUS.
8. PSEUDOPAMERA AURIVILLIANA.
9. PEPHYSENA INSIGNIS.
10. GONATAS DIVERGENS.
11. LARGUS SUBLIGATUS.
12. „ AFFINIS
13.14. „ CONVIVUS.
15. LARGUS LONGULUS.
16.17.18.19. „ CINCTUS.
20.21. „ BIPUSTULATUS.
22. STENOMACRA CLIENS.
23. „ MARGINELLA. *Var.*
24♂25♀. FIBRENUS GLOBICOLLIS

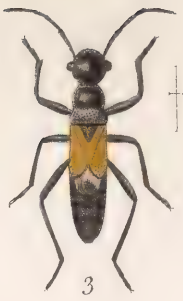
W. Purkiss lith.

Hanhart imp

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

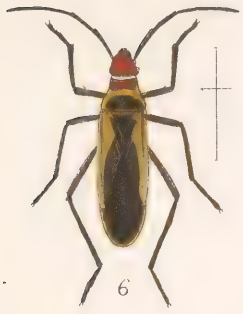

1

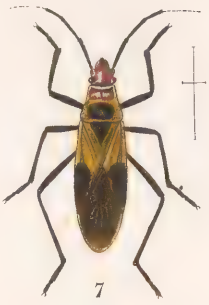

2

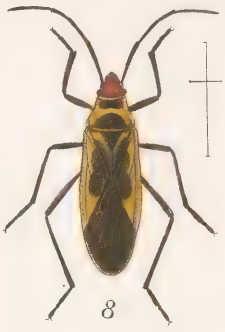

3

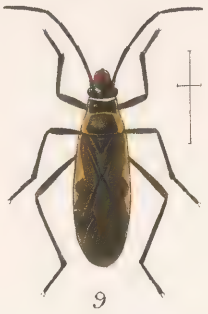
4

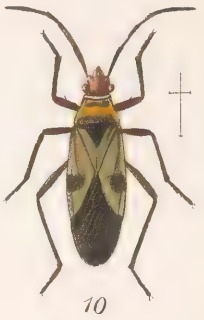
5

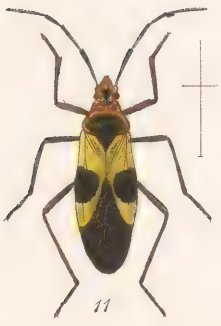

6

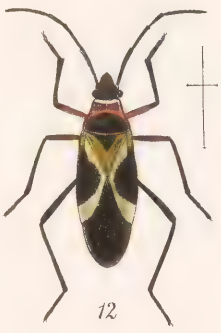

7

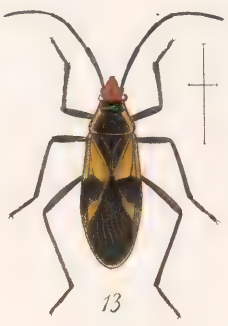

8

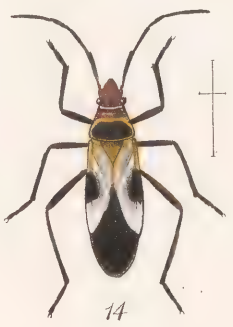

9

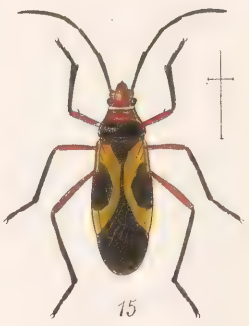

10


11

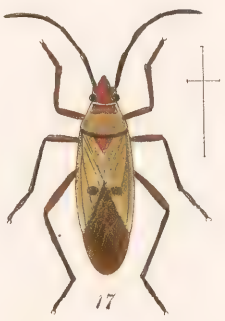

12

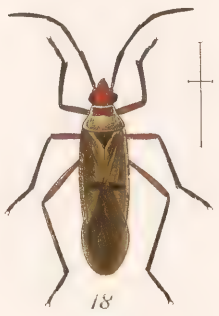

13

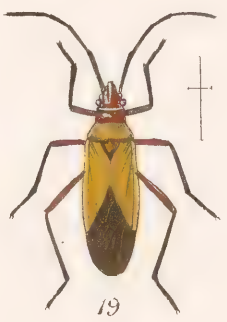

14

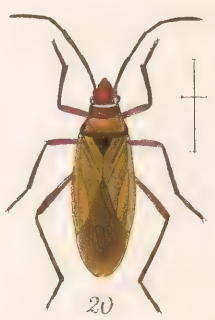

15

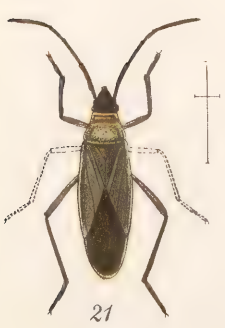
16

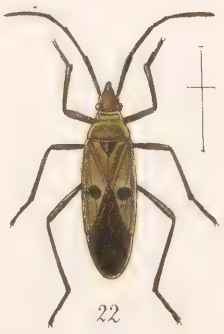

17

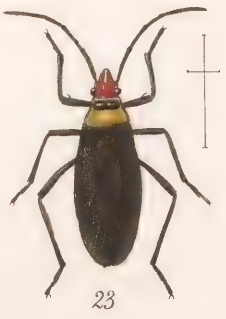

18

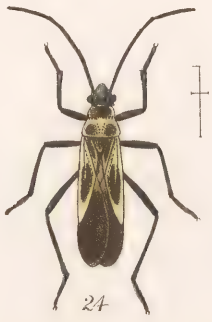

19

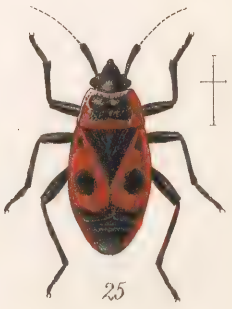

20


21


22


23


24


25

1. FIBRENUS GIBBICOLLIS
2. ARHAPHE CICINDELOIDES.
3. JAPELTUS SPHÆROIDES.
4. DYSDERCUS MIMUS *Var.*
5. „ ALBIDIVENTRIS *Var.*
6. „ FLAVO-LIMBATUS.
7. „ INCERTUS.

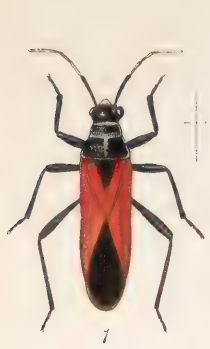
8. 9. DYSDERCUS OBSCURATUS.
10. „ ALBIDIVENTRIS *Var.*
11. 12. „ CONCINNUS *Vars.*
13. „ ONCOPELTUS.
14. „ SPLENDIDUS.
15. „ CONCINNUS *Var.*

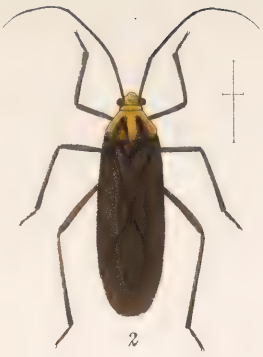
16. 17. 18. DYSDERCUS OBLIQUUS *Vars.*
19. 20. „ RUFICOLLIS *Vars.*
21. „ CAPITATUS.
22. „ CHIRIQUINUS.
23. „ RUFICEPS.
24. THERANEIS DISSIMILIS.
25. PYRRHOCORIS APTERUS.

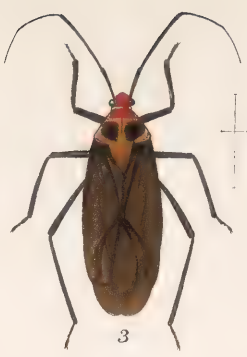
W.Purkiss.lith.

Hanhart imp.

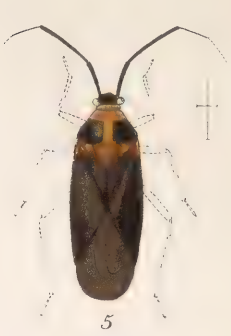
KODAK Color Control Patches
© The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters
Inches

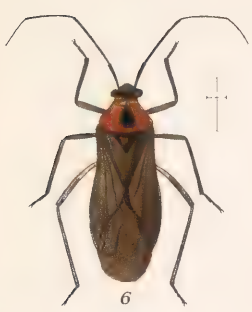

1


2

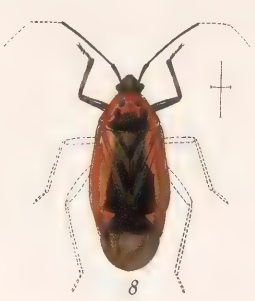

3

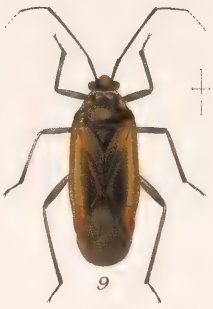
4

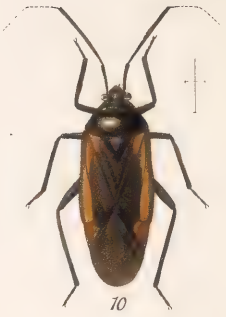

5

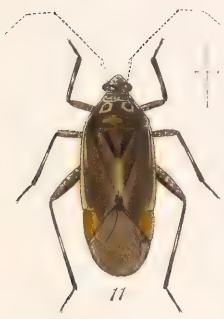

6

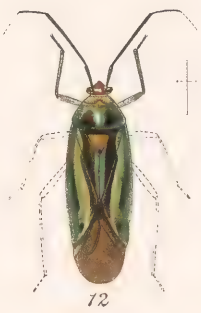
7

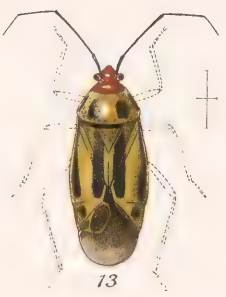

8

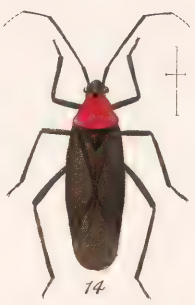

9

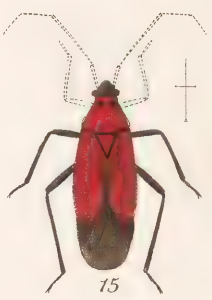

10

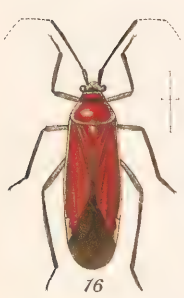

11

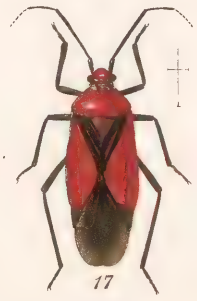

12

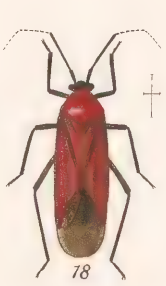

13

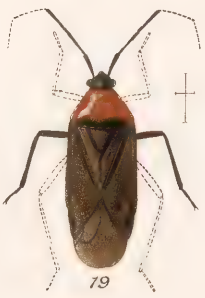

14


15

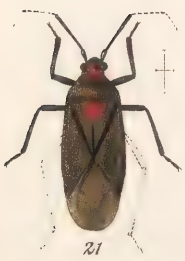

16


17

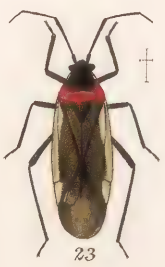

18

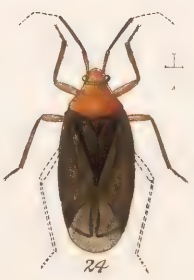

19

20


21

22


23


24

25

1 THERANEIS PULCHRA.
2 RESTHENIA PICTICOLLIS.
3 „ ~~CANDENS~~ *pullata*.
4 „ MELANOCHRUS.
5 „ ORNATICOLLIS.
6 „ LATIPENNIS.
7 „ „ *var.*
8 CALOCORIS TINCTUS.
9 CALOCORIS SEMIOPACUS.
10 „ OPACUS.
11 PARACALOCORIS FISTULOSUS
12 13 PŒCILOCAPSUS NIGRIGER, *vars.*
14 RESTHENIA THORACICA.
15 „ INTERPUNCTA.
16 „ MARGINANDA.
17 „ SUDATUS.
18 RESTHENIA PARVA.
19 NEOCAPSUS MEXICANUS.
20 RESTHENIA EXORNATA.
21 „ PERSIGNANDA.
22 CALOCORIS NIGRICANS.
23 HADRONEMA MILITARIS.
24 ECCRITOTARSUS GENEROSUS.
25 „ GENETIVUS.

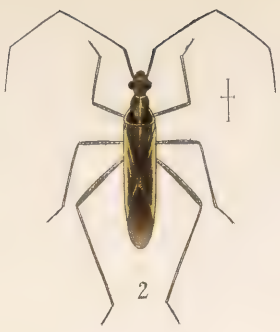
KODAK Color Control Patches
© The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters
Inches

1 PŒCILOCAPSUS ALACER.
2 LYGUS SALLÆI.
3 „ „ *var.*
4 „ PRATENSIS, *var.*
5 NEUROCOLPUS MEXICANUS.
6.7 LYGUS PRATENSIS, *vars.*
8 „ INSPERSUS.
9 „ SCUTELLATUS.
10 LYGUS CRISTATUS.
11 MEGACŒLUM SIGNATUM.
12 „ RUBRINERVE.
13 ORASUS ROBUSTUS.
14 ECCRITOTARSUS PALLIDIROSTRIS.
15 FULVIUS ANTHOCORIDES.
16 LYGUS PRATENSIS.
17 CALOCORIS? INUSTUS.
18 LYGUS SCUTELLATUS, *var.*
19 ECCRITOTARSUS MUNDULUS.
20 MIRIS ROSEUS.
21 SYSINAS LINEARIS.
22 CALONDAS SUPERBUS.
23 LOPIDEA SCITULA.
24 FURIUS PICTUS.
25 MONALONION ANNULIPES.

W. Purkiss lith. Hanhart imp.

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

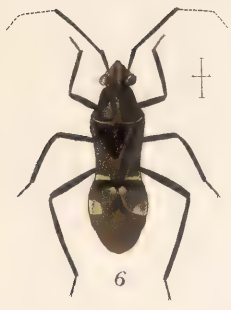
1


2

3

4

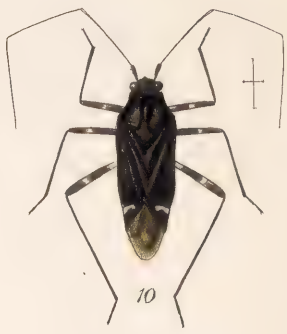
5a 5

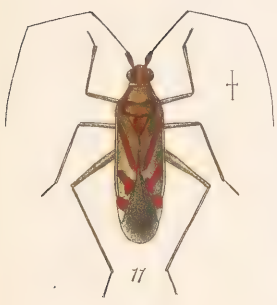

6

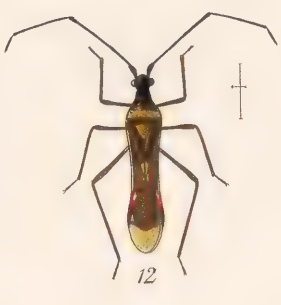
7

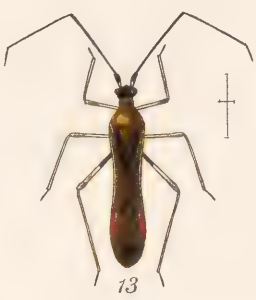
8

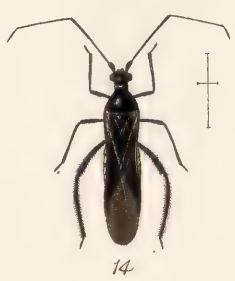
9

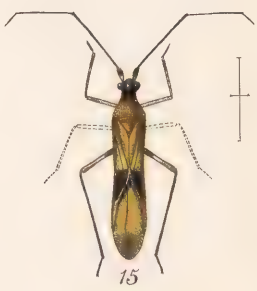

10

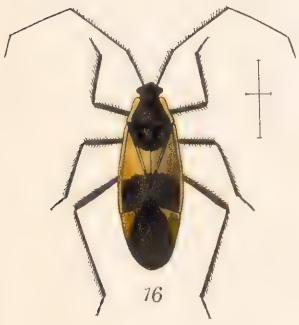

11


12

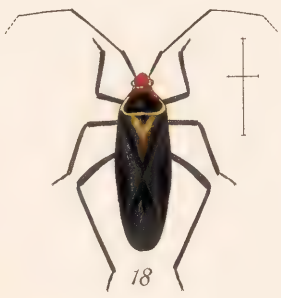

13

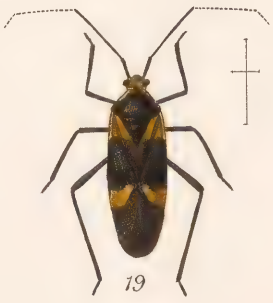

14

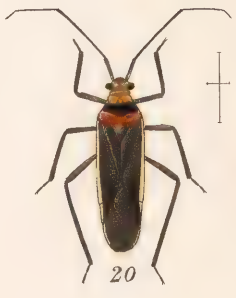

15

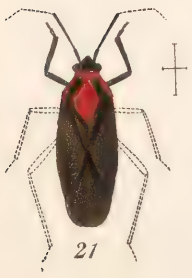

16

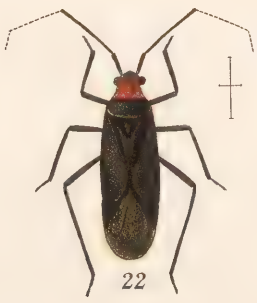
17

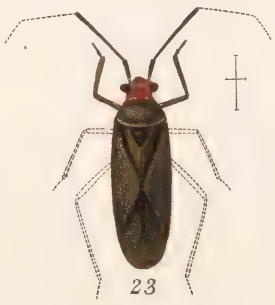

18

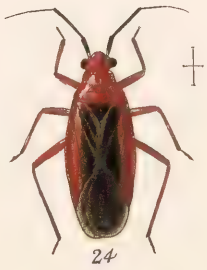

19

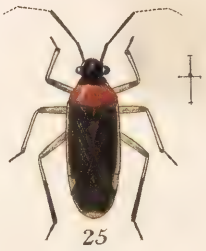

20


21


22


23

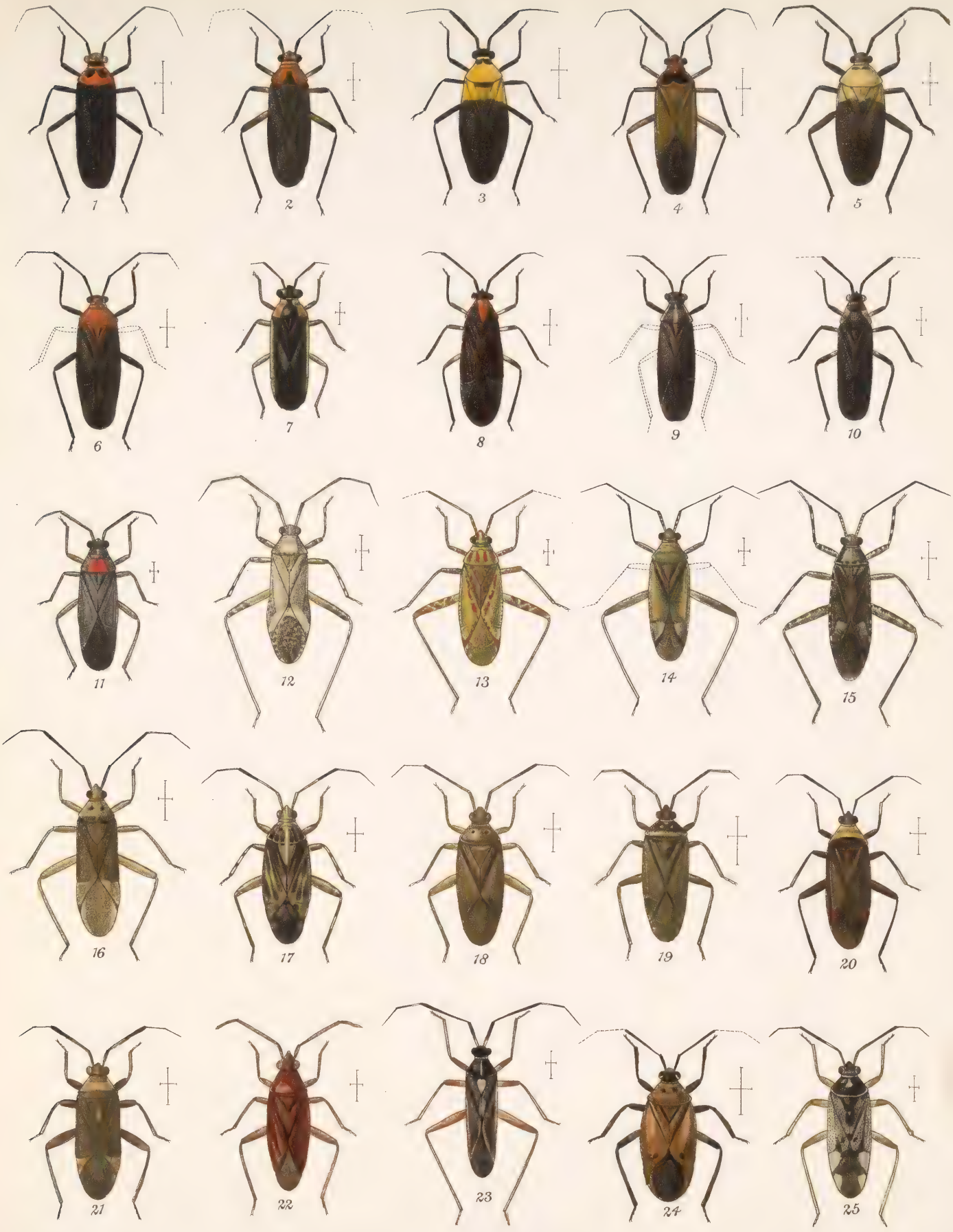

24


25

1 MINYTUS ARGILLACEUS.
2 TRACHELOMIRIS OLEOSUS.
3 XENETUS LANUGINOSUS.
4 „ BRACTEATUS.
5, 5a ZACORUS STAPHYLINIFORMIS.
6 ZOSIPPUS INHONESTUS.
7 VALDASUS FAMULARIS.
8 „ FUNEBRIS.
9 VALDASUS STYGIUS.
10 „ RUGOSUS.
11 VANNIUS RUBROVITTATUS.
12 MONALONION VERSICOLOR.
13 „ HILARATUM.
14 „ ATRATUM.
15 „ DISSIMULATUM.
16 LYGDUS SIMULANS.
17 PIASUS ILLUMINATUS.
18 RESTHENIA PLAGIGERA.
19 „ LUTEIGERA.
20 „ HÖGBERGI.
21 „ BIVITTIS.
22 „ VITTICEPS.
23 „ VITTIFRONS.
24 SYSINAS FLORIDULUS.
25 „ AUDENS.

W. Purkiss lith. Hanhart imp.
339.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8



1 RESTHENIA MONTANA.
2 „ UNIVITTATA.
3 „ CHIRIQUINA.
4 „ OBSCURANS.
5 „ GUATEMALENA.
6 „ PANAMENSIS.
7 SYSINAS CENTRALIS.
8 ZOPYRUS RUBROMACULATUS.
9 ZOPYRUS LUTEOFASCIATUS.
10 ADMETUS FIMBRIATUS.
11 OFELLUS PRÆSTANS.
12 COMPSOCEROCORIS DUBITATUS.
13 „ VILIS.
14 „ ELEGANS.
15 „ MISTUS.
16 TÆDIA BIMACULATA.
17 PARACALOCORIS JURGIOSUS.
18 PARACALOCORIS MOLLICULUS.
19 „ BALTEATUS.
20 „ LUNATUS.
21 „ MASTRUCATUS.
22 PAPPUS SORDIDUS.
23 GARGANUS ALBIDIVITTIS.
24 CALOCORIS FASCIATIVENTRIS.
25 PROBA GRACILIS, *var.*

W. Purkiss lith. Hanhart imp.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters Inches

1. CALONDAS FASCIATUS.
2. " TESTACEUS.
3. PROBA GRACILIS
4. PARAPROBA FASCIATA.
5. " PALLESCENS.
6. NEOPROBA RUBESCENS.
7. " VARIANS.
8. PANDAMA PRÆCLARA.
9. LYGUS TACTUS.
10. " TRIBULIS.
11. " VINACEUS.
12. PŒCILOCAPSUS FRUMENTARIUS.
13. HORCIAS VARIEGATUS.
14. " NOTATUS.
15. " ~~THORACICUS~~ chiriquinus.
16. PLAGOSUS.
17. CALOCORISCA VILLOSA.
18. CALOCORISCA TENERA.
19. ECCRITOTARSUS INCURVUS.
20. " ATRATUS.
21. MALA UNICOLOR.
22. " ORNATA.
23. Annona DECOLORIS.
24. NEOLEUCON HORRIBILIS.
25. SPARTACUS ALBATUS.

W. Purkiss lith.

Hanhart imp.

KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

1,2,3,4 PŒCILOCAPSUS ORNATULUS, *vars*
5 NEOBORUS SAXEUS.
6 " SCABER.
7 " HIRSUTUS.
8 EUBATAS CHIRIQUINUS.
9 HORCIAS DECORATUS.
10 " PLUMATUS.
11 HORCIAS RUTILUS.
12 " UNICOLOR.
13 CALOCORISCA THORACICA.
14 " ANTENNATA.
15 CIMATLAN DELICATUM.
16 FULVIUS ALBOMACULATUS.
17 " FUSCANS.
18 " ATRATUS.
19 HENICOCNEMIS ALBITARSIS.
20 " ALBO-ORNATA.
21 SILIA VIDUATA.
22 " CINERACEA.
23 CHIUS MACULATUS.
24 PARACHIUS LUTEOLUS.
25 ANIA BIMACULATA, *var.*

W. Purkiss lith.
Hanhart imp.
362.

1 ECCRITOTARSUS SPLENDENS.
2 „ VESTITUS.
3 PSEUDOBRYOCORIS BICOLOR.
4 MONALOCORISCA GRANULATA.
5 „ RAVIDA.
6 CARNUS LUNATUS.
7 „ PARVUS.
8 PSEUDOCARNUS LINEOLATUS.
9 PSEUDOCARNUS MAGNUS.
10 FUNDANIUS MACULATUS.
11 „ PALLESCENS.
12 „ ALBOMACULATUS.
13 NEOFURIUS VILLOSUS.
14 „ AURATUS
15 „ AMETHYSTUS.
16 „ SCRIPTUS.
17 NEOFURIUS DECORATUS.
18 „ INFUMATUS.
19 „ HIEROGLYPHICUS.
20 „ PALLIDULUS.
21 „ PLAGOSUS.
22 „ LINEARIS.
23,24 BIBACULUS MODESTUS.
25 PARACARNUS ELONGATUS.

W.Purkiss lith.

Hanhart imp.
374

KODAK Color Control Patches
© The Tiffen Company, 2000
Kodak
LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters
Inches

1 NEOCARNUS VITREUS.
2 NEOSILIA SORORIA.
3 FALCONIA POETICA.
4 " CADUCA.
5 ANTIAS SUBÆRATUS.
6 " AHENEUS.
7 FUSCUS CRINITUS.
8 TRYGO IMITATIONIS.
9 JORNANDES CHAMPIONI.
10 FLORUS INSOLITUS.
11 PIRITHOUS PALLIPES.
12 EUROTAS NODOSUS.
13 LAMPETHUSA ANATINA.
14 DEMARATA VILLOSA.
15 TYNACANTHA SPLENDENS.
16 PODISUS SCULPTUS.
17 SUPPUTIUS TYPICUS.
18 PODISUS FALCATUS.
19 DINOCORIS MACRASPIS.
20 ARCHITAS PUDENS.
21 BEROALDUS ERUBESCENS.
22 LOBOTHYREUS ANSATUS.
23 SYMPHYLUS RAMIVITTA.
24 GALEACIUS TESSELLATUS.
25 SYMPHYLUS VERNUS.

Hanhart imp
521

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

1 THYREOCORIS MARGINELLUS.
2 ALKINDUS ATRATUS.
3 CHLENOCORIS DISSIMILIS.
4 ACHATES RAMOSUS.
5 AGANOSOMA TRILINEATUM, *var.*
6 HOMEMUS RETOSTUS.
7 " FUMEUS.
8 SYMPHYLUS ALBOMACULATUS.

W.Pudney lith.

9 CAMIRUS PULLATUS.
10 CYRTASPIS TRINOTATA.
11 CHLENOCORIS COMPRESSUS.
12 ORSILOCHUS (?) LIVERSUS.
13 STIRETRUS ANNULATUS.
14 PODISUS SMITHI.
15 " AMULE.
16 " GAUMERI.
17 BOTERUS GUATEMALENSIS.

18 AROCERA JALAPENSIS.
19 " CHIRIQUENSIS.
20 CHLOROCORIS USITATUS.
21 THYANTA MACULATA.
22 PALANTIA MACULA.
23 BOEA COSTARICENSIS.
24 BANASA STIGMOSA.
25 EDESSA TAURIFORMIS.

Hanhart imp.

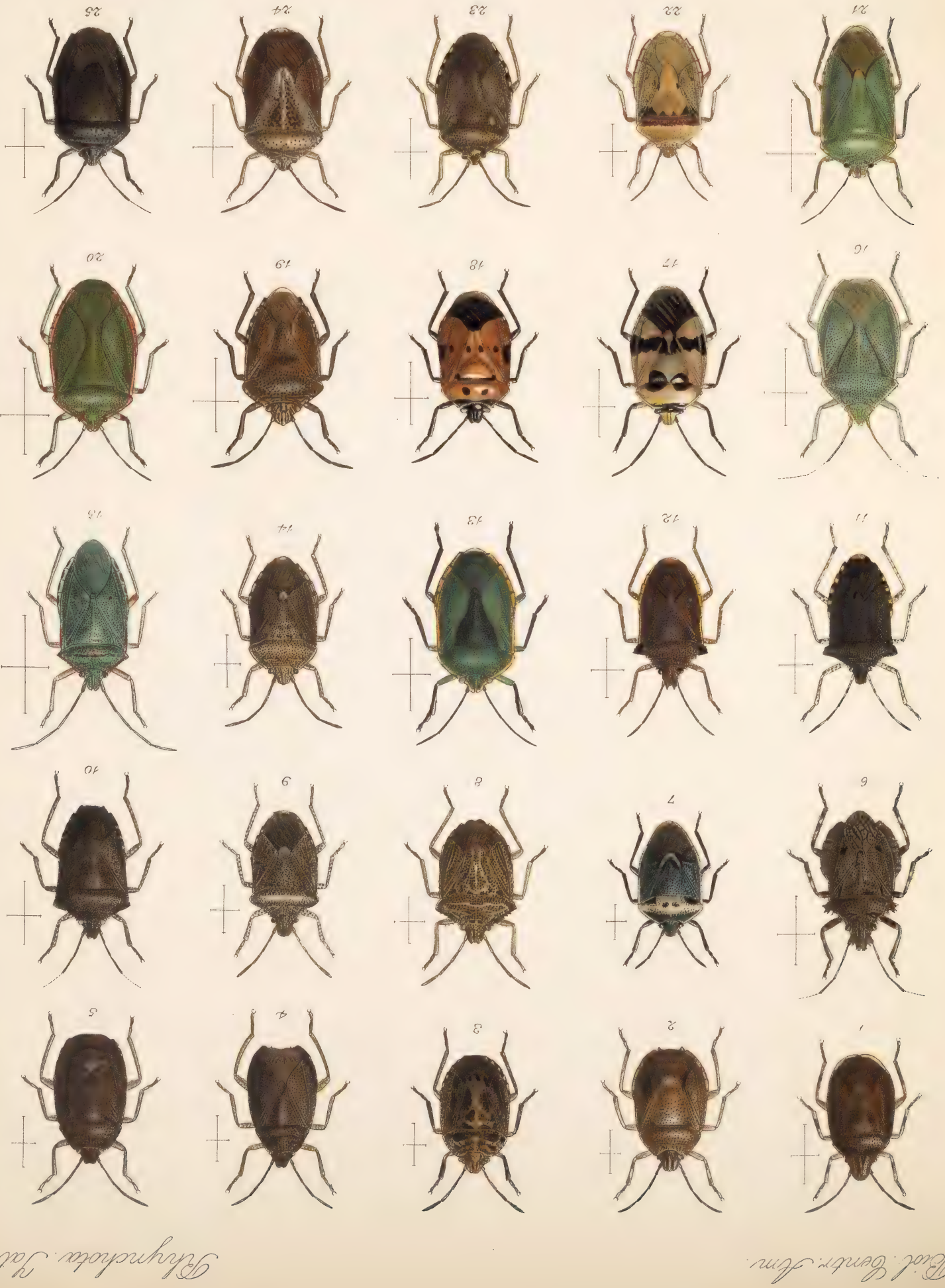
Gland. Genit. Stirn. *Pentatomidae. Tab. 30.*

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

1 DINOCORIS COMPLANATUS .
2 PRIAPISMUS FOVEATUS .
3 " MACULATUS .
4♂,5♀ MATHIOLUS GENERATUS .
6 BROCHYMENA ACULEATA .
7 COSMOPERLA BINOTATA .
8 AGRÆCUS GRISEUS .
9 EUSCHISTUS ZOPILOTENSIS .
10 EUSCHISTUS CAPITATUS .
11 " TEAPENSIS .
12 DICHELOPS BICOLOR .
13 CHLOROCHROA MONTIVAGA .
14 TRICHOPEPLA DUBIA .
15 CHLOROCORIS RUFOPICTUS .
16 " HEBETATUS .
17 AROCERA SCHUMANNI .
18 AROCERA ALTIVOLA .
19 NEZARA CANDENS .
20 " MALUSCULA .
21 " SCUTELLATA .
22 PIEZODORUS TINCTUS .
23 BRACHYSTETHUS PARVUS .
24 EDESSA DENSATA .
25 " PICATA .

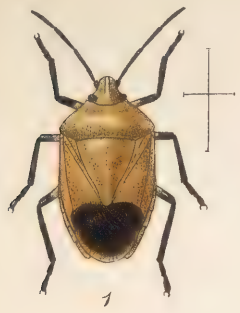
W. Parkiss lith.

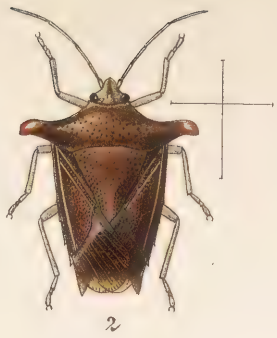
Hanhart imp. 543

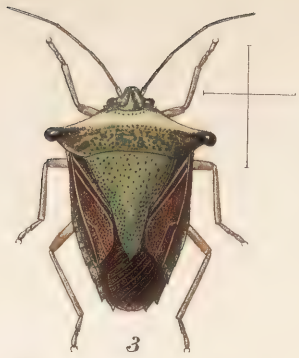


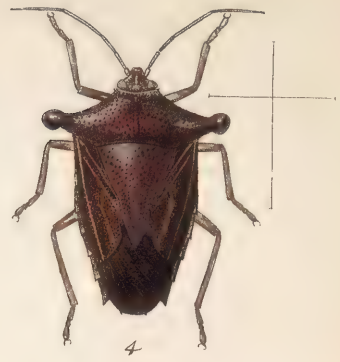
Geol. Surv. Ohio. Vol. 3.

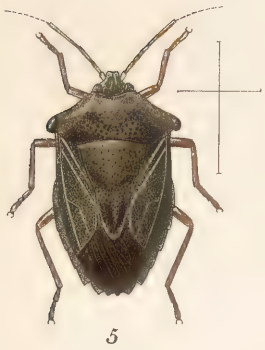
Rhynchota. Pl. 31.

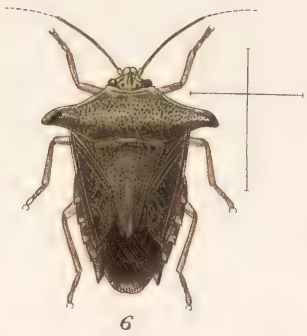

1


2


3

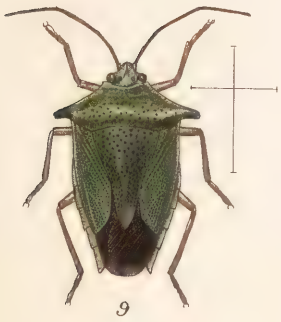

4

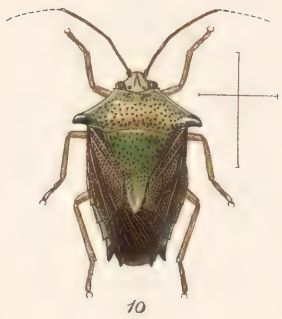

5

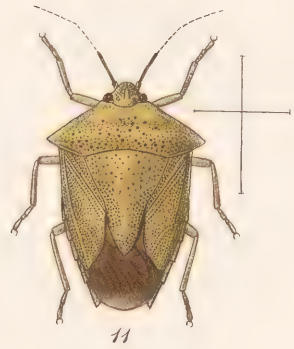

6

7

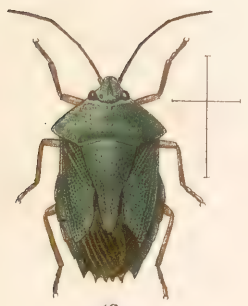
8

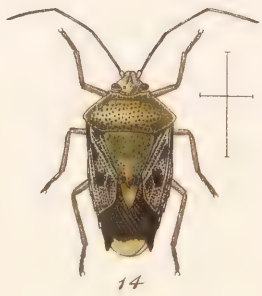

9

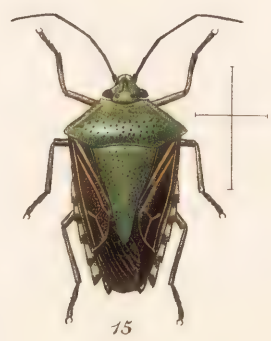

10

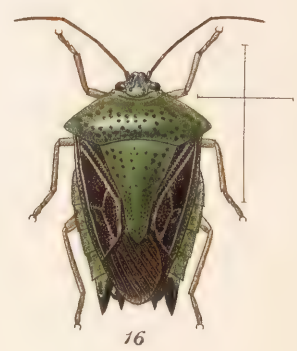

11

12


13

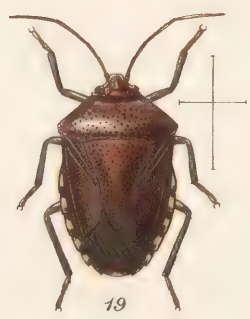

14

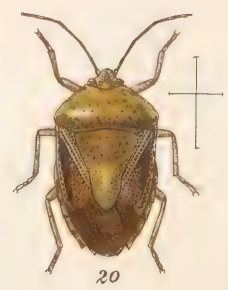

15


16

17

18


19

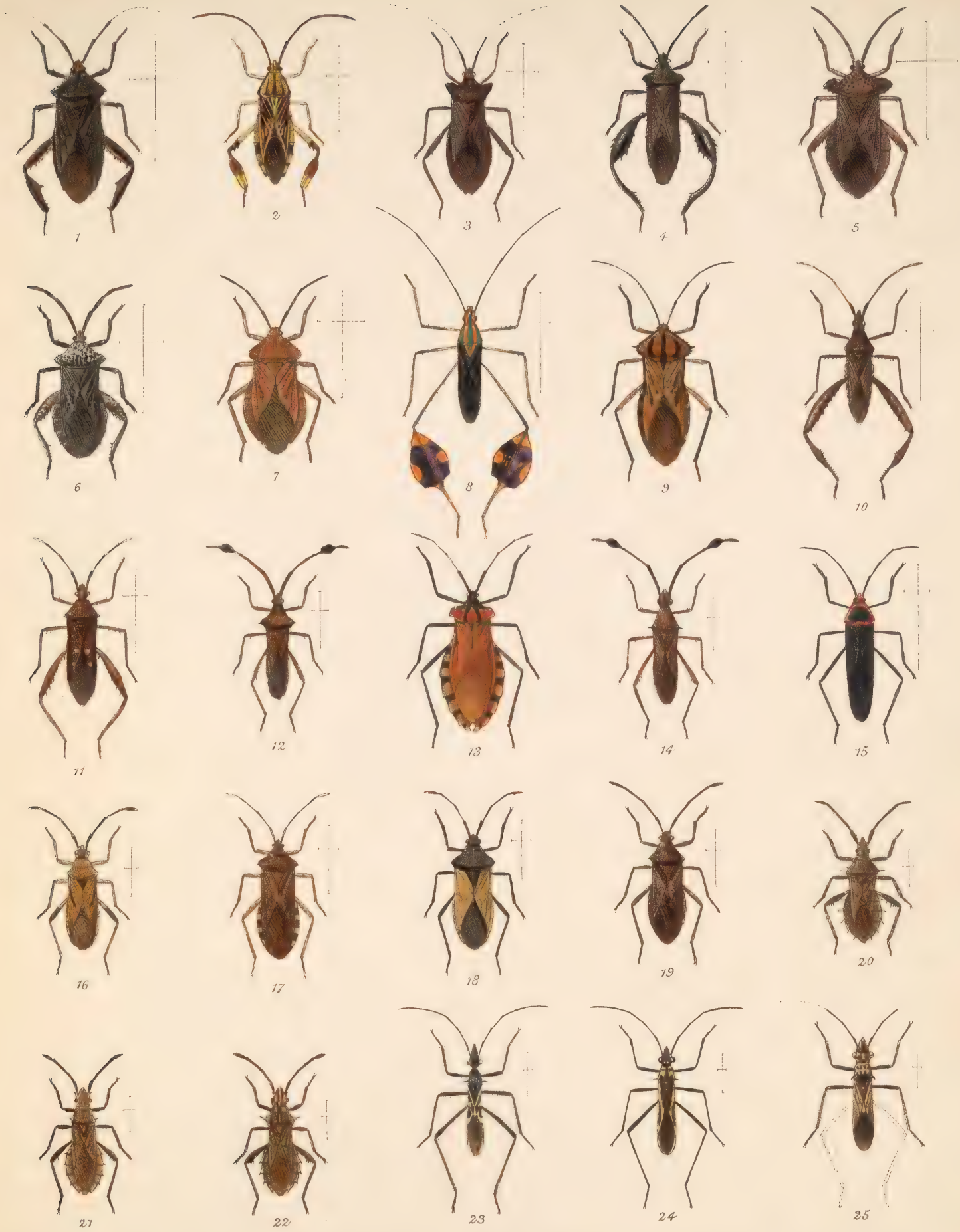

20

1 NEZARA PANAMENSIS.
2 EDESSA INTORTA.
3 „ PICTIVENTRIS.
4 „ BULBACEA.
5 „ GENTILITIA.
6 „ TRIBUARIA.
7 „ BUGABENSIS.
8 EDESSA PROJECTA.
9 „ PENNATA.
10 „ FUSCISPINA.
11 „ JANSONI.
12 „ PRÆFACTA.
13 „ JUNIX, *var*.
14 EDESSA METATA.
15 „ CELSA.
16 „ EXPOLITA.
17 „ POLYMITA.
18 „ INDIGENA.
19 „ CALDARIA.
20 „ ABDITA.

W. Purkiss lith.

Hanhart imp.

KODAK Color Control Patches
© The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters
Inches



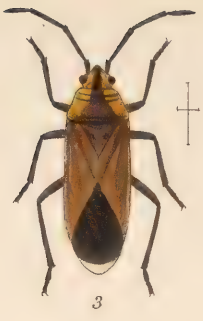
1 MELUCHA BICOLOR.
2 „ QUINQUELINEATA.
3 CAPANEUS CHONTALENSIS.
4 ARCHIMERUS CHIRIQUINUS.
5 CAPANEUS HUMEROSUS.
6 OJEDANA LORICATA.
7 BARDISTUS SERRULATUS.
8 DIACTOR BOGOTANUS.
9 BARDISTUS FORMIDABILIS.
10 NARNIA INORNATA.
11 LAMINICEPS QUADRISIGNATA.
12 CHARIESTERUS ROBUSTUS.
13 SPARTOCERA GIGANTEA.
14 CHARIESTERUS CUSPIDATUS.
15 SPHICTYRTUS BUGABENSIS.
16 ANASA DECRETORIA.
17 „ DELIBATA.
18 ANASA VERSICOLOR.
19 „ MONTIVAGA.
20 VILGA MEXICANA.
21 „ DISSIMILIS.
22 „ DIVARICATA.
23 TRACHELIUM TESSELLATUS.
24 CYDAMUS INAURATUS.
25 „ DEAURATUS.

W. Purkiss lith. Hanhart imp.

KODAK Color Control Patches
© The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters
Inches

1

2


3

4

5

6

7

8

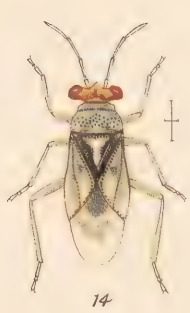
9

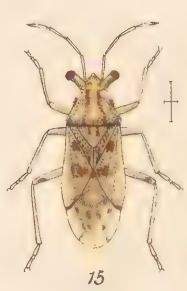
10

11

12

13


14


15

16

17

18

19

20

21

22

23

24

25

1 LYGÆUS TEAPENSIS.
2 » ALBULUS.
3 ACROLEUCUS NIGELLUS.
4 » SCELERATUS.
5 » RUBEFACTUS.
6 » DELINEATUS.
7 NICUESA SPECIOSUS.
8 NYSIUS (?) MONTICOLA.
9 NYSIUS (?) EMENTITUS.
10 BELONOCHILUS MEXICANUS.
11 ISCHNORHYNCHUS PUNCTATUS.
12 » THORACICUS.
13 MAYANA COSTATA.
14 NINYAS TORVUS.
15 ENCISCOA INERMIS.
16 » ACUMINATUS.
17 » MUCRONATUS.
18 CYMUS MEXICANUS.
19 » GUATEMALANUS.
20 ISCHNODEMUS CAHABONENSIS.
21 » UMBRATUS.
22 TOONGLASA FORFICULOIDES.
23 PACHYGRONTHA BIMACULATA.
24 ACOLHUA CHAMPIONI.
25 PERIGENES DISPOSITUS.

W. Purkiss lith. Hanhart imp 607.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

1 DAVILA CONCAVUS.
2 „ CONSANGUINEUS.
3 „ PALLESCENS.
4 CATENES PORRECTUS.
5 PSEUDOPAMERA FORRERI.
6 PLOCIOMERA ALBOMACULATA.
7 CHOLULA DISCOLORIA.
8 ERLACDA (?) INSITITIA.
9 PRYTANES GLOBOSUS.
10 „ ATER.
11 SISAMNES CONTRACTUS.
12 BATHYCLES MACULATUS.
13 NEOCATTARUS THORACICUS.
14 „ MACULATUS.
15 „ (?) IRRORANDUS.
16 CÆNEUS NOVITIUS.
17 SCYTHINUS SPLENDENS.
18 CLIGENES DISTINCTUS.
19 SALACIA (?) PICTURATA.
20 „ (?) DELINEATA.
21 PETISSIUS ASSIMILANDUS.
22 „ (?) DIVERSUS.
23 SALACIA (?) PUNCTATA.
24 EREMOCORIS GERMANUS.
25 BALBOA VARIABILIS.

W. Purkiss lith. Hanhart imp.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

1 DORACHOSA ILLUMINATUS.
2 BUBACES CASTANEUS.
3 RHAPTUS COLLINA.
4 ESURIS PURPURATA.
5 PELIOPELTA TROPICALIS.
6 PHÆAX FORMICARIUS.
7 „ BALTEATUS.
8 MIRIS PANAMENSIS.
9 EIONEUS BILINEATUS.
10 MINYTUS BICOLOR.
11 ZOSIPPUS FŒDUS.
12 „ GIBBUS.
13 HERDONIUS (?) PANAMENSIS.
14 LYGDUS MIMICUS.
15 CYLAPUS PICATUS.
16 JOBERTUS CHRYSELECTRUS.
17 ZOILUS GUERREROENSIS.
18 ZOILUS MARGINATUS.
19 „ FULIGINEUS.
20 RANZOVIUS CRINITUS.
21 RESTHENIA TRUJILLOI.
22 „ SCHUMANNI.
23 „ ACCINCTA.
24 „ PANNOSA.
25 „ TEAPENSIS.

W. Purkiss lith. Hanhart imp.

KODAK Color Control Patches © The Tiffen Company, 2000
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Kodak LICENSED PRODUCT
Centimeters Inches

1 RESTHENIA INTERCIDENDA.
2 LOPIDEA MEXICANA.
3 " BICOLOR.
4 COMPSOCEROCORIS PRÆSIGNIS.
5 PŒAS REUTERI.
6 PARACALOCORIS BIVITTATUS.
7 PAPPUS INSIGNIS.
8 " EGENS.

9 GARGANUS SPLENDIDUS.
10 JACCHINUS TABASCOENSIS.
11♂,12♀ CALOCORIS (?) CANUS.
13 MEGACŒLUM (?) SANGUINOLENTUM.
14 NEOPROBA NOTATA.
15 PANDAMA AUREA.
16 LYGUS TACTILIS.
17 " PANAMENSIS.
18 " UVIDUS.

19 LYGUS SPARSUS.
20 " PELLITUS.
21 " HOSPITUS.
22 " ORDINATUS.
23 " LANUGINOSUS.
24 " CUNEATUS.
25 PŒCILOCAPSUS MOLLIS.
26 " SCUTELLATUS.

W. Purkiss lith.

Hanhart imp
618.

KODAK Color Control Patches
© The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters
Inches

1 RHASIS AMPLIFICATUS .
2 NEOBORUS FASCIATUS .
3 » CRASSUS .
4 » MANIFESTUS .
5 » FUNEREUS .
6 NEOCAPSUS CUNEATUS .
7 HORCIAS MEXICANUS .
8 » PLAUSUS .

9 CALOCORISCA TENEBROSA .
10 » CHONTALENSIS.
11 CIMATLAN MINUENS .
12 » PERTINGENS .
13 ECCRITOTARSUS VULTUOSUS .
14 » IMPAVIDUS .
15 » PORRECTUS .
16 » PEROBSCURUS .
17 » MARGINATUS .

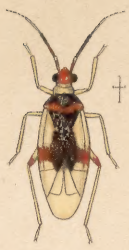
18 ECCRITOTARSUS PROCURRENS .
19 MONALOCORISCA TUBERCULATA .
20 » LINEATA .
21 » LATERATA .
22 » EMISSITIA .
23 » COLORATA .
24 » SCUTELLATA .
25 CARMELUS FASCIATUS .

W. Purkiss lith. Hanhart imp

1

2

3


4

5

6

7

8

9

10

11

12

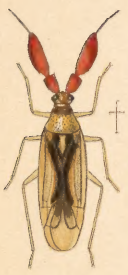
13

14

15

16

17


18

19

20

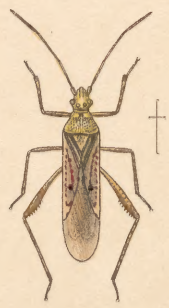
21

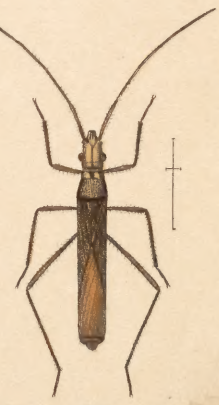
22

23

24

25


26


27

1 CARMELUS SANGUINEUS.
2 PARACARNUS MEXICANUS.
3 ANNONA LABECULATA.
4 NEOFURIUS POLLUTUS.
5 » TABASCOENSIS.
6 » MARGINATUS.
7 NEOSILIA PULCHRA.
8 JORNANDES PRÆUSTUS.
9 » PUNCTATUS.
10 JORNANDES SUBALBICANS.
11 » CRURALIS.
12 » DISSIMULANS.
13 » VULGARIS.
14 » INTERMEDIUS.
15 » SEMIRASUS.
16 » LAUTUS.
17 FICINUS SAGITTARIUS.
18 AUCHUS FOLIACEUS.
19 DEMARATA MIRIFICA.
20 ATIZIES SUFFULTUS.
21 CAPIVACCIUS BUFO.
22 CRATO URBICUS.
23 GALEOTTUS FORMICARIUS.
24 CURUPIRA VILLOSA.
25 RENODÆUS FICARIUS.
26 XENOGENUS EXTENSUM.
27 BACTRODOSOMA ELONGATUM.

W. Purkiss lith. Hanhart imp.

KODAK Color Control Patches
© The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters
Inches